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**REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN  
PARLIAMENT**

**on the coexistence of genetically modified crops with conventional and organic farming**

**Implementation of national measures on the coexistence of GM crops with conventional  
and organic farming**

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**DOCUMENT IN ELECTRONICAL VERSION ONLY**

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## **Implementation of national measures on the coexistence of GM crops with conventional and organic farming**

This report is mainly based on the information provided by the Member States in response to a questionnaire circulated by the Commission. Empty cells, where the information made available by the Member States was not sufficient to provide a detailed description of the situation have been deleted.

### **1. Technical details concerning the national or regional coexistence legislation**

#### *1.1. Information, registration and training procedures*

##### 1.1.1. Procedures for the information of public authorities of GM crop cultivation

AT	<p>The legislation of the regions (Länder) differs in detail. Generally, farmers who intend to cultivate GM crops have to inform public authorities three months in advance. Information to be provided includes (not necessarily in all regions): the land registry designation of the parcel of land concerned with the intended use as well as that of the adjacent parcels of land (partly also names and addresses of owners of adjacent parcels); a proof of land ownership or other right of use relating to the parcel of land intended to be used; a proof of the agreement of the landowner (co-owner) for the intended use for the duration of the application, if the notifier is not the sole owner; a description of the size, location and nature of the parcel of land that is to be used; details enabling identification of the GMOs that are to be applied to the land and of their particular properties and characteristics; proof of the approval issued under the genetic engineering law, including any conditions and instructions provided for thereby; a description of the conditions of application (objectives, schedule for application, methods of application, number of GMOs, procedure for disposal or destruction of the GMOs) and details of possible recipient plants; details of the intended precautionary measures; a declaration of the farmer to possess appropriate knowledge in order to avoid an inappropriate use of GMOs and be able to take the necessary preventive measures.</p>
BE	<p>Flanders (draft measures): Farmers who intend to cultivate GM crops shall inform the competent authority and shall submit a certificate which shows that training on the cultivation of GM crops has been followed. The Flemish Government still has to determine the exact content of the information (but the farmer's name, address, exact location of the crop field, type of GMO are certainly needed) and the ultimate notification date (probably approximately 4 months before the sowing or planting date).</p> <p>Wallonia: A registration is compulsory. The procedure is still to be defined. Information to be provided: identity, location of the crop, species that will be planted, unique identifier, variety name, planned date of planting, result of neighbours' notification, declaration of notification to other parties (if needed: owner of the land, farmer using machinery in common), engagement to respect specific cultural practices</p>

CY	Measures not yet determined
CZ	Information provided to the Ministry of Agriculture by Bt maize growers before sowing (at the latest on 1 <sup>st</sup> March of the growing year for maize and potatoes): farmer's identification, identification of the field (unique number according to the Land Parcel Identification System), supposed sowing date of GM crop and information whether a buffer zone will be implemented, including its extent.
DE	All plantings of GMOs, including field trials and commercial cultivation, must be entered into a public register. Notifications must be received three months in advance for commercial cultivation, or three days in advance for a field trial. The entry in the register must specify the name and the unique identifier of the GMO, its novel trait(s), site location and size, and the name and address of the farmer or scientist. Personal information is withheld from the public unless it is of personal interest to an inquirer, e.g. if a farmer wants information on who is growing GM crops in the immediate vicinity.
DK	Farmers have to inform public authorities about GM crop cultivation in the coming summer and winter season not later than the 21 April each year. The requested information is: location of the GM cropping indicated by field number and field block number according to national field register, field size, species and variety of the GM crop. The information shall be provided on the same form that farmers use to apply for subsidies.
EE	(Draft measures) Farmers intending to grow GM crops have to notify the competent authority, which registers GM crop growers.
ES	(Current situation) There is no obligation to notify the public authorities about the intention of growing GM maize. Seed marketers have the obligation to notify farmers or seed distributors about the quantity of GM seeds marketed in each agricultural season. These GM seeds are registered in the National Commune Catalogue of Agricultural Species.  (Draft measures) Farmers will have to notify the regional competent authority information on the plots when they intend to grow GM crops. The information, which includes location of the plot, variety of the GM crop and acreage among other data, shall be provided in written form and at the latest one month before sowing.
FI	Before sowing or planting GM plant material the grower shall make a written notification to the local authority. The notification shall be made for each growing period before the first day of December preceding the aimed sowing or planting date. The notification shall contain contact information of the grower; the identity of the farm, enterprise, community or person; the name of the plant variety and the acreage and precise location of its cultivation; intended time of starting the cultivation; and the name of the person that has passed the examination enacted for GM crop cultivation and the date of passing the examination. In case of withdrawal of the notified cultivation, entirely or in part, a written notification of withdrawal shall be made without delay to the above-mentioned authority.

FR	<p>There is no obligation for farmers to inform public authorities concerning their intent to grow GM crops. GM crop growers must declare the cultivation after the sowing. The following information has to be provided: the exact location of the field, the cadastral references, the surface, the date of the sowing, the unique identifier of the GMO, and the contact details of the farmer. The information has to be provided at the latest by 15 May.</p>
HU	<p>The sowing of GM seeds shall not be undertaken unless in possession of a valid cultivation consent of the designated authority (the Ministry of Agriculture and Rural Development). Farmers have to ask for permission from the competent authority to grow GM crops at least 90 days before the foreseen date of sowing. The application shall include the following information: the name and company name of the grower, the permanent address or legal abode, the client registration number, the location of growing, its cadastral number, size, block identification numbers of land sections, as well as the plant species intended to be grown, the unique identifier, and the GM trait. The farmer also has to provide the competent authority a certificate, which proves that he participated in the coexistence course. After the examination of the application, the competent authority may issue a preliminary cultivation consent in which it determines the isolation distance and other cultivation conditions, if necessary. After the receipt of the preliminary consent, the farmer has to obtain the prior consent in writing of land owners within the isolation distance designated in the preliminary consent, and if lands within the isolation distance are not being used by the land owner, the prior consent in writing of the land user, and if the notifier is not the owner of land where he intends to grow GM plants, he shall also submit the prior written consent of the owner of the land concerned. If the owner of land within the isolation distance is the Hungarian State, the prior written consent of property management organisation, or in the absence of this, the organisation exerting ownership rights shall be submitted. If the neighbours within the isolation distance approve the GMO cultivation by written declaration, it also means that during the validity of the cultivation consent, they give up growing sexually compatible plants. All written approvals have to be sent to the competent authority no later than 20 days before the foreseen date of sowing. The competent authority makes its final decision on the cultivation within 15 days.</p>
IR	<p>(Draft measures): GM crop growers have to inform the competent authority (Department of Agriculture, Fisheries and Food (DAFF) and provide information to following information: Crop, area, temporal separation, training. The deadline for notification is 60 days before planting.</p>
IT	<p>(Draft measures): The guidelines foresee that a person having the intention to cultivate GM crops has to apply for an appropriate authorisation by the end of November of the previous year and, in any case, at least three months in advance before planting GM crops, supplying the following information: Registry office of the producer; cultivated species and the GM variety; foreseen destination of the product (food, feed, seeds or material of multiplication, industrial products, other); foreseen period of cultivation; cadastral reference of the concerned area (ISTAT code, province and municipality, number of map, parcel and sub-parcel); reference of enabling licence; declaration for the communication made to the nearest producers and owners of the land. In the case of rented land the</p>

	<p>application has to contain a copy of the formal owner agreement. At the same time, a farm management plan has to be notified. Moreover, the producers have to proceed to the payment of the regional tariff per hectare of the GM crop cultivation and to notify within 15 days after planting, the location of the GM plant and the date of the actual seeding.</p>
LT	<p>Farmer must at least 30 days prior to the planned date of sowing or planting, inform the Ministry of Agriculture of the Republic of Lithuania and the Ministry of Environment of the Republic of Lithuania using the form attached in Annex I of Coexistence Rules of the intention to cultivate GM crops. In this form the farmer indicates the municipality, sub-district of the fields where GM crops are to be cultivated, land block number, name of the plants in GM crops and the unique identifier of the GMO.</p>
LU	<p>Farmers must inform the competent authority (ASTA) two months before sowing GM crops of the exact location of these fields.</p>
LV	<p>GM crop growers shall submit to the State Plant Protection Service a notification for their inclusion in the Register of Growers not later than three months prior to the commencement of the activity, and during the subsequent years shall inform the State Plant Protection Service in writing regarding any changes. The following information shall be indicated in the notification: 1. the date and place of the notification submission; 2. the notifier's given name, surname, personal identity number, firm name, registration number and date in the Enterprise Register, address and telephone number; and 3. species, variety, area of the field, the location of the field (address) and the purpose of the cultivation of the GM crops to be cultivated.</p>
NL	<p>Per the 1<sup>st</sup> of February GM crop growers have to inform the public authorities, especially the DR (Service of Rules and Regulations). They have to provide the type of crop and exact location.</p>
PL	<p>Measures not yet determined</p>
PT	<p>Farmers must submit the GM crop cultivation notification form 20 days before the anticipated date of sowing at the latest to the farmers' organisation or the Regional Agricultural Service. Requested information: Name, Address, attendance of training course, species, variety, seed lot number, plot number, area to be sown, probable date of sowing/planting, coexistence measures.</p>
RO	<p>Farmers using seed produced by third parties or from own production shall apply for an authorisation, subsequently recorded in the County Register at the latest by the 1<sup>st</sup> of May every year, to the county office of the Ministry of Agriculture (Agricultural and Rural Development Directorate- ARDD). In case of winter crops, the authorisation request shall be submitted at the latest 1<sup>st</sup> of July.</p> <p>In order to be authorised, the farmers have to annually file an application with the respective county. The application comes together with a file containing the following documents: a) identification documents: for natural persons: photocopy of the ID bulletin / card; for legal persons: photocopies of the registration certificate and fiscal registration certificate; b) documents certifying</p>

	the registration in the Farm Register; c) a statement of the applicant, concerning the area operated and the compliance with the GMO legislation (the application form and statement are presented in legislation).
SI	(Draft measures) A notification shall be submitted by the head of an agricultural holding who intends to cultivate GM crops submitted to the Ministry not later than 60 days prior to the planned cultivation of these GM crops. The head of an agricultural holding shall give the following information in the application: (a) information on the applicant (company or personal name and head office or address; ID number from the business register or citizen's uniform ID number); (b) specification of agricultural holding (KMG-MID number assigned to them under the act governing agriculture); area, registered in the Register of Agricultural Holdings (RAH), where GM crops are intended to be grown (GERK-PID or part of GERK, actual area of crop); (c) GM crops intended for cultivation (species and variety of agricultural plant, and unique identifier for GMOs and type of processing (open field or protected area); (d) measures envisaged for ensuring coexistence and the location and the area of agricultural land, where this measures will be taken (for areas registered in RAH: GERK-PID; for other areas: cadastral municipality and the parcel number); (e) responsible person for the cultivation of GM crops that is professionally qualified for the management of GM crops (name and address; ID number; number and date of the valid examination certificate); (f) written agreement regarding a joint implementation of measures for ensuring co-existence between GM crop producers and the heads of agricultural holdings. If the applicant can assure all measures on his own area registered in Register of Agricultural holdings or the on the land located in a specific area around an individual piece of land or area (the isolation distance) the written agreement is not required.
SK	Cultivation of GM crops shall be notified to the Central Control and Testing Institute of Agriculture (UKSUP), providing the following information: Name of locality, maps of locality with place of production and a declaration that the farmer attended a training course in the handling with GM crops. Every year before the cultivation the farmer shall inform the UKSUP and add a statement that the neighbouring field users have been informed. Technical plans for the GM crop cultivation shall be added.
SV	GM crop growers must inform the Swedish board of agriculture, SBA, about the cultivation of GM crops. Only actual cultivation is to be reported to the SBA, not intentions to cultivate. A form is made available and shall be sent to the SBA within two weeks from sowing. The form contains questions on: name, telephone number and a customer number; crop, variety name, identity of the field and if there has been made an agreement with a neighbour farmer (see point 1.2.5).

#### 1.1.2. Procedures for the information of third parties of GM crop cultivation

AT	The regional legislation varies. In most regions (Länder), GM crop growers have to inform owners or users of adjacent areas (in some cases excluding those of roadways) and areas only separated by roadways without delay and must be able to demonstrate proof of this notification. In some regions, information about the
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	<p>cultivation of GM crops must be published in the newsletter of the Chamber of Agriculture and/or in a daily newspaper that is widely distributed in the region. In other regions, proof of notification of neighbours has to be presented to the Chamber of Agriculture. No such information requirements exist in one region.</p>
BE	<p>Flanders: Farmers intending to cultivate GM crops shall inform by means of a statement of intention all farmers working on plots with boundaries that are either wholly or partly within the notification distance (to be determined per plant species) and, additionally, the person who agreed the cultivation contract for the plot on which the farmer intends to cultivate the GM crop. The exact information to be provided has not been defined yet. Probably the notification period will be approximately three months before the sowing or planting date, to give neighbouring farmers the opportunity to appeal.</p> <p>Wallonia: A notification to neighbours is compulsory. The procedure is still to be defined.</p>
CY	Measures not yet determined
CZ	<p>GM crop growers are obliged to inform the users of land parcels which are located in a crop specific distance (for maize 70 m to conventional and 200 m to organic farmers) at the latest by 1<sup>st</sup> March of the growing year for maize and potatoes.</p>
DE	<p>GM crop growers shall notify the neighbours of the following information no later than three months prior to sowing or growing: 1. name and address; 2. the plot of land to be cultivated and the size of the area of cultivation; 3. the plant species and the name and the unique identifier. Any changes to this information shall be notified without delay. Where GM crop growers are unaware of the identity of a neighbour they may give notification to the owner of the area in question whilst asking the said owner to pass the information on to the farmer in question. If, within one month of the owner receiving notification, the grower has not received any response, the grower may assume that the owner is the farmer of the area in question.</p>
DK	<p>GM crop growers have to inform owners and users of fields located within a certain distance of their GM field. The information includes species and location. The information shall be given not later than 1<sup>st</sup> February for spring crops and 1<sup>st</sup> July for winter crops. Farmers are also obliged to inform agricultural supply service agencies and transport companies they order to handle or transport GM crops that the crop is GM.</p>
EE	<p>GM crop growers have a duty to inform owners and users of fields situated within the isolation distances (GM maize: 300 m) three months before the intended cultivation of a GM crop. They have to provide information about the species of the crop. They also have to provide, in writing, information about the intention to grow GM crops to beekeepers, whose beehives are situated up to three kilometres away from the field, where GM crops are planned to be grown. In case of the sale, farming out, leasing or other form of transfer of land on which GM crops have been cultivated, the transferor shall notify the acquirer of this fact</p>

	in writing.
ES	<p>(Current situation) There are no mandatory information requirements.</p> <p>(Draft measures) Farmers must inform in writing their adjacent neighbours as well as those farmers whose crop fields fall within the required isolation distances, about their intention to grow GM crops one month before the sowing date at the latest.</p>
FI	Information on forthcoming GM crop cultivation has to be notified in the register (about 5 to 6 months) in advance. General information on GM crop cultivation is published by the registration authorities separate for each commune. More detailed information on the plans for forthcoming GM crop cultivation in each locality can be obtained by interested third parties from the register authorities. GM crop growers must inform other actors who commonly use machinery, equipment, transport equipment or facilities with him about the GM crop cultivation.
FR	(Draft measures) Farmers must inform their neighbours about their intent to grow GM crops before the sowing. The conditions will be described in an Order.
HU	After the receipt of the preliminary consent, a GM crop grower has to obtain a written approval from the neighbours (farmers/field owners), which operate within the isolation distance (For more details see point 1.1.1). After the competent authority issued the final consent for the cultivation, it publishes data included in the application as well as all relevant information on the conditions of the cultivation in the national database without delay.
IR	(Draft measures) GM crop growers have to inform all other farmers within the isolation distance, providing information about the crop species, sowing date, etc. The deadlines are not specified as yet but must be available on application to the Department of Agriculture and Food.
IT	(Draft measures) The guidelines foresee that a person who has the intention to cultivate GM crops has to inform the nearest farms in conformity with procedures established by the Region using an official regional form. A deadline is not foreseen. In the case of rented land, the person has to inform the land owner in order to get a formal agreement for the cultivation of GM crops, which is to be attached to the application.
LT	Farmer must, prior to the declaration of GM crops, in writing, using the form attached to the coexistence rules, inform the owners of holdings located at the minimum isolation distance and beekeepers keeping apiaries within a distance of 5 km of the cultivation of GM crops providing the copies of plans for crop rotation and cultivation of plants in GM crops. In this form the farmer indicates the municipality, sub-district of the fields where GM crops are to be cultivated, land block number, name of the plants in GM crops and unique identifier of the GMO.
LU	The exact location of the fields where GM crops are intended for growing is immediately communicated to the public through a national register on GM

	crops.
LV	GM crop growers shall: 1. inform in writing bee-keepers regarding the cultivation of such GM crops which are nectar plants; 2. inform the owners or users of the neighbouring fields in writing regarding the cultivation of GM crops and shall append information on the species of the GM crop, as well as a copy of a land border plan (with the cadastre number of the land unit), on which the boundaries and area of the field of GM crop are indicated. Deadlines have not been set. Farmers must do this before registration in the GMO register.
NL	Farmers have to inform neighbouring farmers by the 1 <sup>st</sup> of February of their intention to grow GM crops.
PL	Measures not yet determined
PT	GM crop growers must inform in writing neighbouring farmers, and farmers that they are sharing agricultural machinery with (such as sowing or harvesting machinery), of their intention to cultivate GM crops, within 20 days before the planned date for sowing at the latest.
RO	GM crop growers have to inform about their intention to grow GM crops, in written form, both the legal owners of the land and the landowners in the neighbourhood within the isolation distances provided in the specific rules and norms related to the seed production, as well as the town-hall under whose jurisdiction the land plots fall. The owners of the lands neighbouring the GM crops, within the isolation distances, can submit an appeal, in written form, both to the grower and to the county Directorate for Agriculture and Rural Development (ARDD) competent in the area where the land is located, within 10 days after receipt of this information. Informing the landowners in the neighbourhood about the intention to grow GM crops should be made before the authorisation process.
SI	(Draft measures) Farmers have to inform the heads of agricultural holdings or owners of land located within the isolation distance of their intention to grow GM crops. By written agreement to the intended cultivation of GM crops, these heads of agricultural holdings and other owners of land within this distance assume a responsibility to take a number of measures to prevent the adventitious presence of GM crops in other agricultural plants and products. If the producer of GM crop can assure all necessary measurement by himself, no other information procedure is necessary. The draft of the Act does not determine the content of such written agreements.
SK	GM crop growers shall inform neighbouring field users within the isolation distance about the intention to cultivate GM crops and its maturity class.
SV	GM crop growers must provide written information to economic operators who use agricultural land within 100 meters from the intended GM field. The information shall be given no later than 1 <sup>st</sup> of November and contain information that cultivation of GM crop is planned, which crop species and the location of the cultivation.

1.1.3. Information procedures applying for operators other than farmers dealing with GM seeds or harvested material of GM crops (obligations resulting from Community legislation are not listed)

BE	Flanders and Wallonia: No further requirements
CY	Measures not yet determined
CZ	No further requirements
DE	No further requirements
DK	Owners or users of vehicles, machinery and equipment, transport facilities etc. that have been used to handle GM seeds or GM crops have to inform about that handling to the next customer or user, if this is a conventional or organic farmer. There is a corresponding information obligation for owners and users of storage facilities. There is also an information duty in relation to the sale, leasing, rental or other forms of transfer of areas of land that have been cultivated with GM crops. There is also an information obligation in connection with sale, rental or other forms of transfer of machinery, storerooms, etc. that have been used to handle or store GM seeds or GM crops.
EE	No further requirements
ES	GM seed producers and distributors have to provide, in writing, farmers with information needed to ensure the compliance with co-existence, labelling and traceability measures. GM seed marketers have to notify to the competent authority how many seeds they sold on a yearly basis. This information is also provided to seed distributors and farmers.
FI	(Draft measures) No further requirements
FR	(Draft measures) No further requirements
HU	Seed distributors have to keep record on GM seed sales and have to notify to the competent authority how many seeds they sold on a yearly basis. They also have to inform buyers that GM seeds can only be sowed if they possess a valid cultivation consent.
IR	(Draft measures) Seed suppliers must furnish records
IT	(Draft measures) Operators have the obligation (a) to ask the Region for inclusion into a specific register, supplying information on the operations regarding the use of GM crops; (b) to keep records of the necessary information to identify the operator of the request, of the machines used, the production lines, equipments, the factories and stores related to the different operations, which have to be reserved only for the transgenic cultivations and their products; c) employees responsible for the use of GMOs have to obtain a Licence of Service Ability, delivered by each Region in which the activity is conducted, except in

	cases of mutual recognition, following the participation of training courses related to the separation of GM and non-GM production chains; d) to implement the measures of precaution in their own competence indicated in the GMO specific technical forms approved by the Region; e) to proceed to the payment of the annual regional tariff of registration; f) to subscribe before the service payment an insurance policy or a guaranty to cover the potential damages caused.
LT	No further requirements
LU	The import of GM seeds must be declared to the competent authority
LV	A person wishing to store, prepare and to pack GM crops shall submit to the State Plant Protection Service a notification for its inclusion in the Register of Growers prior to the commencement of activity, and, during the subsequent years, shall inform the State Plant Protection Service in writing regarding any changes. The following information shall be indicated in the notification: 1. the date and place of the notification submission; 2. the notifier's given name, surname, personal identity number, firm name, registration number and date in the Enterprise register, address and telephone number. 3. the species and variety of the crop, the location of the material and technical basis, its owners and the co-operation partners in performance of the activities with GM crops.
NL	(Draft measures) A compulsory course for GM crop growers and operators is under currently construction.
PL	(Draft measures) Detailed information procedures to be applied by operators other than farmers will be provided by Seeds Legislation, which is already also under preparation.
PT	Seed companies must provide to the regional services of agriculture the list of farmers having purchased from them seed of GM varieties in each agricultural season.
RO	No further requirements
SI	No further requirements
SK	No further requirements
SV	No further requirements

#### 1.1.4. Information on GM crop cultivation made available to the general public or to parties with a specific interest

AT	A public register is available in all regions (Länder). Certain differences exist as regards the detailed information made available. The minimal information provided includes the name of the commune, in which GM crops are cultivated, cultivation surface in hectares, species and variety of GM crops, unique identifier
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	<p>of the GMO, name and address of the owner of the parcels on which GM crops are cultivated and of the GM crop grower. Registry of the parcels, on which GM crops are cultivated. Not all of this information may be necessarily accessible in electronic form.</p> <p>In some regions, more comprehensive information is made available: in the case of natural persons, name, place of residence and delivery address, in the case of legal persons and unincorporated firms under mercantile law, legal form, company registration number and head office; the land registry designation of the parcel of land concerned with the intended use as well as that of the adjacent parcels of land; proof of land ownership or other right of use relating to the parcel of land intended to be used; proof of the agreement of the landowner (co-owner) for the intended use for the duration of the application, if the notifier is not the sole owner; description of the size, location and nature of the parcel of land that is to be used; details enabling identification of the GMOs that are to be applied to the land; a description of the conditions of application (objectives, schedule for application, methods of application, number of GMOs, procedure for disposal or destruction of the GMOs) and details of possible recipient plants; details of the intended precautionary measures; a written declaration about sufficient knowledge to prevent an inappropriate use of GMOs and to apply the necessary precautionary measures.</p> <p>In some regions the details as regards the information made available are not yet determined.</p>
BE	<p>Flanders: (Draft measures) The Flemish Government still has to decide on the accessibility of the information in the register; it will be minimally the information as foreseen in Royal decree of 21 February 2005 (Belgian transposition of Directive 2001/18), the type of GMO and the municipality where the plot is located.</p> <p>Wallonia: (Draft measures) To be decided – but the decree gives the possibility to publish the location of individual fields.</p>
CY	<p>(Draft measures) The following information is made available to the general public: all applications, all authorizations, all supplementary information, all notifications, the specific location of the cultivation and all convictions, where these apply.</p>
CZ	<p>The Ministry of Agriculture does not provide the exact locations of Bt maize fields to the general public. Persons interested in knowing these locations have to send a written request to the Ministry of Environment, which is also notified about the locations directly by farmers.</p>
DE	<p>All plantings of GMOs, including field trials and commercial cultivation, must be entered into a public register. The entry in the register must specify the name and the unique identifier of the GMO, its novel trait(s), site location and size, and the name and address of the farmer or scientist. Personal information is withheld from the public unless it is of personal interest to an inquirer, e.g. if a farmer wants information on who is growing GM crops in the immediate vicinity.</p>

DK	The location of fields cultivated with GM crops is published on the internet site of the Danish Plant Directorate <a href="http://gmomark.pdir.dk/">http://gmomark.pdir.dk/</a> each year in the beginning of May. It is also possible to see GM crop cultivation locations from earlier years. The internet site contains a dynamic map of Denmark with location and size of GM fields.
EE	(Draft measures) All available data, except personal data.
ES	(Draft measures) The regional competent authority will keep records of the information provided by farmers in an ad-hoc register. The competent authority has to notify this information to the Ministry of the Environment and Rural and Marine Affairs within a month after receiving the data from the farmers. This Ministry will keep the information in a central register. Although the location of the plots is part of the information notified by farmers, it is not planned to disseminate it to the general public.
FI	(Draft measures) Information on the register is public except for certain personal data or confidential business data.
FR	Up to now, the information on the location of GM crop fields was given to the public at the level of the canton. According to the new law, the exact references of the fields will be published on the internet.
HU	After receiving the application from a farmer who intends to crop GM plants, the content of the application (e.g. name of the notifier, location, size of the plots, plant species/variety intended for sowing, plot number) will be published in the central database without delay. Furthermore, all data included in the application as well as relevant information on the cultivation conditions will be published in the national database immediately after the authorization of the GMO cultivation.
IR	(Draft measures) General location and crop species
IT	(Draft measures) The guidelines foresee keeping a regional register, composed of different sections (areas of the GM crop cultivations, authorizations to cultivate GM crops, licences of ability, operators of the agri-food chain) with the purpose of keeping all information regarding operators within the food production chain that are connected to the GM crop cultivation. The register, while respecting the rules for the protection of personal data, is publically available and can also be consulted electronically.
LT	General statistical data of GM crop cultivation (genus, variety, GMO unique identifier, area) will be available on the internet as soon as GM crop cultivation will be declared. Data on the cultivation of GM plant propagating material (municipality, species, variety, category, field plots) is available on the internet site of the State Seed and Grain Service under the Ministry of Agriculture.
LU	The exact location of the fields where GM crops are intended for cultivation is immediately communicated to the public through a national register on GM crops.

LV	The State Plant Protection Service shall ensure all activities indicated in the national regulations that relate to the development and managing of the Register of Growers, storage and publication of information.
NL	Information provided by the GM crop grower is made public by a GMO register at provided by the Ministry of Housing, Spatial Ordering and Environment through an internet site and at the Ministry itself. Exact locations are made public, but not linked to the names of the farmers or ownership of the locations.
PL	Measures not yet determined
PT	The regional services of agriculture and the DGADR make available through their internet sites the following information per notification: farm name, if any; variety sown; estimated sowing date; coexistence measure applied. Additionally, the DGADR also submits all information concerning the notifications for cultivation of GM crops to the Portuguese Environment Agency of the Environmental Ministry, which is the responsible entity for recording the cultivation of GM varieties in accordance with Directive 2001/18. Also, this entity makes available to the public some of the above-mentioned information. All information is protected according to legislation on personal data protection.
RO	The information made available to the general public is the total area planted with GM crops, and, if requested, also the area per counties. Individual locations are not made available for the general public.
SI	(Draft measures) All data (i.e. the location and area, where GM crops are cultivated, isolation distances, the area for cultivation of GM crops on the basis of mutual agreements among neighbours, GMO-free areas on the basis of agreements (will be available in maps), the species of GM crop, and measures for the coexistence) shall be accessible to the public and will be published on the Ministry internet site, except data protected by the Personal Data Protection Act, or confidential business information, or tax secrets.
SK	UKSUP forwards the information about GM crop cultivation to the Ministry of Agriculture. The following information will be published: the number of farmers, species and acreage of GM crops in a region, the number of locations with GM crops, the yield and the holdings.
SV	The SBA will provide information on the internet, such as the type of GM crop grown, and in which municipality and parish. Closer information on the location could be released upon request.

#### 1.1.5. Mandatory authorisation or notification procedures<sup>1</sup> for the cultivation of GM crops and, if applicable, conditions to be met by farmers to receive authorisation for the cultivation of GM crops

<sup>1</sup> Authorisation procedure for each field means that cultivation of GM crops is not allowed prior to receiving authorisation by a local authority following an application by the farmer. In the case of a

AT	Depending on the region (Land), either an authorisation procedure or a notification procedure applies: farmers intending to grow GM crops have to inform/apply at the competent authority, providing the information listed under 1.1.1., including a proposal on segregation measures (guidance may be provided by the authorities, but is not yet available). An authorisation will be granted provided that the foreseen segregation measures will prevent contamination of non-GM fields. Further coexistence measures may be required. Insurance cover or, alternatively, comparable financial guarantees may be requested in some Länder. In the case of a notification procedure approval must not be awaited by the GM crop grower, but the competent authority may prohibit the cultivation or require specific condition to the cultivation of GM crops within a specified period of time.
BE	Flanders: There is a mandatory notification procedure. If it is not followed, administrative fines are foreseen. The cultivation of the GM crop is, however, never prohibited. Farmers not complying with the legislation are, in addition to administrative fines, held individually responsible for all resulting damage, and the compensation fund will not intervene.  Wallonia: Registration of the GM crop to the control authorities is mandatory. No possibility for the authorities to prohibit cultivation if the required documents are provided by the GM crop grower. An applying farmer has the possibility the complete his dossier in a given period, to be determined by crop according to cultivation practices.
CY	(Draft legislation) Until now, the rules for experimental releases of GMOs also apply for commercial production of GM crops. Thus, the following information need to be submitted to the Scientific Committee: a technical dossier which includes a risk assessment study concerning the environment and human health, a description of the methods to be implemented for the GM crop cultivation, references to bibliography, a monitoring programme, information concerning prior applications or authorisations. The dossier is evaluated by a Scientific Committee that submits a reasoned opinion to the Minister of Agriculture, Natural Resources and Environment for a decision within 90 days.
CZ	No mandatory authorisation or notification procedure beyond what is listed under point 1.1.1.
DE	No mandatory authorisation or notification procedure beyond what is listed under point 1.1.1.
DK	Farmers have to report the cultivation of GM crops to the authorities. In addition, the farmers must pay 100 Danish kroner (~ € 13) per hectare with GM crops as a contribution to the compensation fund. There is no further authorisation involved in this procedure and the public. Authorities cannot prohibit the GM crop cultivation. But farmers who want to grow GM crops have to be educated before

notification procedure cultivation of GM crops is allowed provided that public authorities are informed. Please indicate whether public authorities have the possibility to prohibit the cultivation within a certain time period after notification.

	they can be approved to grow them (see point 1.1.6).
EE	(Draft measures) Notification procedure, and obligatory training
ES	No mandatory authorisation is needed and no mandatory notification procedure beyond what is listed under point 1.1.1.
FI	(Draft measures) The GM crop growers shall give a prior notification of their plans for GM crop cultivation. Formally, there is no authorization required, but there is an obligatory training requirement. Authorities cannot delay or temporarily prohibit the GM crop cultivation, provided the legal requirements are fulfilled by the notifying grower.
FR	No mandatory authorisation or notification procedure beyond what is listed under point 1.1.1.
HU	An authorisation procedure applies. Farmers have to ask for permission from the competent authority to grow GM crops at least 90 days before the foreseen date of sowing. They also have to provide the certificate, which proves that they participated in the coexistence course. After the examination of the application, the competent authority may issue a preliminary cultivation consent in which it determines the isolation distance and other cultivation conditions, if necessary. After the receipt of the preliminary consent, the farmer has to obtain written declarations of all neighbours within the isolation distance on approval of the GMO cultivation. All written approvals have to be sent to the competent authority no later than 20 days before the foreseen date of sowing. The competent authority makes its final decision on the cultivation within 15 days. In the absence of declarations, no cultivation consent may be granted.
IR	(Draft measures) An authorisation procedure applies. GM crop growers must receive approval by the DAFF. Framers have to provide a written agreement in cases of shared isolation distances, verification of rotation and evidence of formal training
IT	(Draft measures) An authorisation procedure applies (see point 1.1.1.).
LT	An authorisation procedure applies. Conditions to meet to obtain an approval: attendance to a special training course, registration of the agricultural and rural holding in the Agricultural and Rural Business Register of the Republic of Lithuania, information of ministries (see above), coordination of the plans for crop rotation and cultivation of GM crops with control bodies (State Seed and Grain Service under the Ministry of Agriculture, State Plant Protection Service).
LU	No mandatory authorisation or notification procedure beyond what is listed under point 1.1.1.
LV	An authorisation procedure applies, dependent on the following conditions: 1. acquisition of at least vocational initial education in agriculture; 2. acquisition of the training programme for GM crops; 3. completion of a course regarding the requirements specified in the regulatory enactments of Latvia and the EU with regard to GMOs and coexistence, if a training programme has been acquired in

	another Member State; 4. registration in the Register of GM crop growers; 5. non-conviction for breaching regulatory enactments regarding the cultivation of GM crops in the two previous years prior to commencement of GM crop cultivation.
NL	No mandatory authorisation or notification procedure beyond what is listed under point 1.1.1.
PL	Measures not yet determined
PT	No mandatory authorisation or notification procedure beyond what is listed under point 1.1.1.
RO	An authorisation procedure applies. GM crops can only be grown by farmers authorised by the Ministry of Agriculture and Rural Development through the county ARDD. The documents which should be submitted are described under point 1.1.1.
SI	(Draft measures) An authorisation procedure applies. If the producer of GM crops (according to the data submitted with the application) meets all necessary measures for coexistence, he is inscribed into the register of GM crops producer by Ministry of Agriculture, Food and Forestry.
SK	A notification procedure applies. Farmers who intend to grow GM crops have to inform the UKSUP on prescribed form providing the information listed under point 1.1.1. The farmer will be listed in a database. In the year of GM crop production the farmer has to inform, by a certain date, UKSUP and the neighbouring field users about his intention to cultivate GM crops. A statement about the information of neighbours and a technical plan for the cultivation of GM crops shall be added to the notification.
SV	No mandatory authorisation or notification procedure beyond what is listed under point 1.1.1.

#### 1.1.6. Requirements on mandatory training to demonstrate a minimum level of knowledge or education for operators dealing with GMOs

AT	In some regions (Länder), no such requirements exist. In one region, GM crop growers have to provide a written declaration about sufficient knowledge to prevent an inappropriate use of GMOs and to apply the necessary precautionary measures. In other regions, public authorities may request a proof of professional expertise in using GM crops in order to grant an authorisation for the cultivation of GM crops.
BE	Flanders: GM crop growers need to prove education by adding an acknowledged certificate with its mandatory notification to the authority. Contractors shall prove education by means of an acknowledged certificate to the delegating (commissioning) farmer. The Flemish Government will determine the minimum period and content of the training and the validity of the training certificate.

	Wallonia: No specific requirements
CY	No such requirements
CZ	No such requirements
DE	No such requirements. However, farmers or other people who deal with GM plants are generally required to have suitable knowledge.
DK	Farmers who want to cultivate GM crops must be educated specifically in coexistence rules and methods how to prevent the spreading of GM seeds, pollen and crops. The education shall be given by an education provider that is approved by the Danish Plant Directorate. When the training is completed the farmer will receive an official approval. The training is a one day course. Also, employees on a farm and owners or employees on agricultural supply service agencies and transport companies that handle GM seeds or GM crops must be educated. After completion of the training the handler will receive a certificate from the Danish Plant Directorate. The course will typically last half a day and contain information about coexistence rules and cleaning of equipment in order to prevent spreading of GM seeds, pollen and crops.
EE	(Draft measures) The person in charge of handling GM crops and the employer of an enterprise dealing with the handling of GM crops have to pass a training about handling GM crops and they have to have a certificate to prove passing the training.
ES	(Draft measures) The public authorities will promote non-mandatory training courses and advice farmers on GM crops, co-existence measures, labelling and traceability.
FI	(Draft measures) The GM crop grower or the person responsible for the GM crop cultivation has to pass an examination organized by the Finnish Food Safety Authority Evira. In the examination, safe and appropriate command of GM crop cultivation and knowledge of the statutory requirements are to be demonstrated.
FR	No such requirements
HU	There is a mandatory training for farmers who intend to cultivate GMOs. The training is an accredited course. The certificate which proves that the farmer participated in the coexistence course should also be sent to the competent authority when applying for cultivation of GM crops. There is further mandatory education every 5 years in order to provide farmers with updated information on coexistence.
IR	(Draft measures) GM crop growers must obtain formal training. Training for other parties is voluntary. The training programme is to be formulated by extension services.
IT	(Draft measures) GM crop growers and operators of the food chain using GMOs have to obtain a licence delivered by the Region, which can be received after the

	participation to a course on coexistence measures.
LT	GM crop growers must attend the special training course and keep the issued certificate of the established form.
LU	No such requirements
LV	GM crop growers must 1. have acquired at least vocational initial education in agriculture; 2. have acquired the training programme for GM crops; 3. have completed a course regarding the requirements specified in the regulatory enactments of Latvia and the EU with regard to GMOs and coexistence, if a training programme has been acquired in another Member State.
NL	(Draft measures) A compulsory course for GM crop growers and operators is currently under construction.
PL	(Draft legislation) Obligatory training for farmers is not foreseen.
PT	Farmers must attend a training course before starting to cultivate GM crops for the first time, which covers general information about GMOs, the national regulation on coexistence, and the EU legislation regarding traceability and labeling. DGADR conducts training and certification to prepare trainers belonging to farmers' organizations or seed companies. Between 2005, when these training classes were started, and December 2007, a total of 154 technicians have been trained and certified to act as trainers for the farmers. These training sessions can be organised by the seed companies, or by the farmers organisations.
RO	The legislation does not provide for mandatory training of GM crop growers. However, as a need to train farmers in order to observe the GMO legislation, has been seen in practice, the Ministry of Agriculture and Rural Development expects the ARRD county office to provide the farmers with training concerning these aspects when authorising them to plant GM crops. There is also a mutual agreement between the Ministry of Agriculture and Rural Development and the seed companies in order to provide stewardship together with the products they deliver. These concern the main provisions of the GMO legislation and technical segregation measures.
SI	(Draft measures) The Act demands special professional training for GM crop grower that will be performed by providers appointed pursuant to the Act. Professional training for a GM crop grower shall be implemented by a training provider according to a programme that encompasses a course and a written examination in the field of GMO management and coexistence. The training must be renewed every five years.
SK	Farmers responsible for growing GM crops have to attend a training course in the handling of GM crops before registration and receive a training certificate.
SV	No such requirements

1.1.7. Provisions on record keeping for GM crop growers (this section does not consider obligations under Community legislation, notably Regulation (EC) No 1830/2003)

AT	No specific provisions on record keeping
BE	<p>Flanders: Farmers shall keep data as to be laid down by the Flemish Government for the cultivated varieties, the cultivation process and the transport to the first storage. The farmer shall make this data available at the request of the competent authority for a period still to be laid down by the Flemish Government.</p> <p>Wallonia: Not yet defined. But the decree gives the possibility to establish an obligation to keep record of any information that can be useful for coexistence management.</p>
CY	(Draft measures) No specific provisions on record keeping
CZ	GM crop growers have to keep information about the crop (species, variety, unique identification code of GMO), the field (identification number, area, plotting of GM crop in the map at a scale of 1:10 000 or at a scale more detailed in case that the area of GM crop is not identical with the land block, information about the fact, if the buffer zone was carried out, including its extent), the timing (sowing date, harvesting date), the quantity (purchased seed, sown seed, harvested product), the supplier (identification of the seed seller), and the handling with the final product (place of the storage, date and quantity of the purchase of harvested product (incl. identification of the purchaser), data on the way of use of the product which has not been sold).
DE	GM crop growers shall keep records regarding the variety of the GM seed or planting material, the types of operation, the application of certain substances, the plant husbandry measures and the species-specific requirements of the Annex to the Act. Records have to be kept for at least five years and shall be submitted to the competent authority under the law of the <i>Land</i> in question on demand.
DK	GM crop growers shall keep records in order to prove that the obligation of informing the neighbours about the GM cropping is fulfilled. If the GM crop grower has made an agreement with his neighbour to cultivate GM crops closer to the neighbouring field than laid down in the coexistence rules, he needs to record the agreement. Regarding the sale of areas, on which GM crops have been cultivated and equipment, which has been used to handle GM crops the seller should be able to prove that he has informed the buyer about the GMO activities.
EE	(Draft measures) The Plant Production Inspectorate keeps a record of GM crop growers. The data of given certificates and documents forming the basis of those certificates are kept by the supervisory authority for ten years. The handler keeps a precise record about fulfilling handling requirements. Documents regarding handling and the provision of information will be kept for ten years.
ES	(Current situation) GM crop growers have to keep the labels of the seed bags and packages for a period of 5 years and inform, in written, the operator buying the harvest about the species, the variety, the genetic modification and the unique

	identifier of the GM seed.
FI	(Draft measures) GM crop growers have to keep records of the information necessary for verifying that the measures for general diligence and appropriate technical requirements asked for in the draft coexistence law have been duly obeyed. Such records shall contain adequate information on the cultivation and storage of GM plant materials, acquisitions and deliveries. The records shall be retained for five years.
FR	There are no specific provisions on record keeping for GM crop growers in the law. This may be considered in the Order.
HU	GM crop growers should keep record on cultivation measures such as the date of the sowing/harvesting, crop rotation, and on yields. Information should be kept on transporting as well as on storage. All measures in order to prevent admixture including crop rotation, cleaning of the machinery/stock should be registered. The records should be kept for 5 years.
IR	(Draft measures) All records are to be retained and available for inspection for five years.
IT	(Draft measures) No specific provisions on record keeping
LT	GM crop growers must keep a strict register on GM crop maintenance, transportation and storage, which must be kept for 6 years.
LU	No specific provisions on record keeping
LV	GM crop growers shall (1) maintain a field history regarding all fields (including the leased) used in agricultural production; (2) maintain documentation regarding the origin, variety, category, quality and quantity of the used seeds; and (3) keep all documentation and notes regarding the cultivation of GM crops and the circulation of the obtained products for six years.
NL	No specific provisions on record keeping
PL	Measures not yet determined
PT	GM crop growers must keep, besides the copy of the notification form sent to official services, an official seed label of each seed lot of the GM variety sown in is farm and also a copy of the document used to ensure the correct labelling and traceability of the product.
RO	GM crop growers have to keep the Authorisation Certificate and a copy of the statement submitted to the ARDD concerning the cultivated surface, seed origin, and used varieties for five years. After harvesting, they are obliged to fill in a two-copy statement concerning the obtained production and its destination. One copy shall be submitted to the ARDD until 1 <sup>th</sup> December, and the other shall be kept in the same file mentioned above. GM crop growers are obliged to establish, at their place of residence or headquarters, a register concerning the seeds' origin and production destination resulting from GM plants; in this register all

	information shall be kept for 5 years.
SI	GM crop growers must keep records of GM crop cultivation in a specific cultivation period, which must contain the cultivation plan, with the buffer, retention and refuge zones marked, and data on: (a) the propagating material used for the cultivation of GM crops (species, variety, unique identifier, quantity of purchased and used propagating material), and its origin (distributor that supplied the propagating material); (b) the quantity of unused propagating material (quantity, eventual storage, the return of unused seed to the distributor, methods used to destroy it); (c) the actual surface area on which GM crops were cultivated, and the surface area of any refuge zone; (d) the date of sowing, planting or transplanting of GM crops; (e) the work done with the machinery, device, equipment, transport or other means, which are not in his property or use (type and date of work, property of machinery and equipment) (f) special features of GM crop cultivation during growth; (g) the date of harvesting of the product and the product quantity; (h) the method used to store, use or dispose of the GM crop product. A GM crop producer must keep the data from the records, proofs of purchase of seed material, and the official labels used to label GM crop propagating material for at least five years from the year the records were created or proof obtained, and in the case of GM crops that are perennial agricultural plants, for at least five years from the year that they ceased to cultivate these GM crops.
SK	GM crop growers are obliged to keep records in a prescribed form on the following information: amount of propagating material purchased, amount of propagating material used for cultivation, yield, handling procedure with the harvested material, amount of un-used propagating material. This information, together with the technical plan for the cultivation of GM crops, has to be kept for 5 years.
SV	No specific provisions on record keeping

## 1.2. Technical segregation measures

### 1.2.1. Maximum tolerance level of GMO admixture in non-GM production that was taken into account to derive the required segregation measures between GM and non-GM production

AT	So far, technical guidelines have not yet been developed.
BE	Flanders: 0.9 %
	Wallonia: Not yet defined.
CZ	In order to ensure that the labelling threshold at the level of 0.9 % is not exceeded throughout the entire food and feed processing chain, segregation measures at farm level were defined to limit GMO admixture to a maximum of

	about 0.5 %, taking account of the possibility of further post-harvest admixture.
DE	0.9 %
DK	0.9 % for crop production. For seed production the tolerance levels originally proposed by the Standing Committee of Seed were used.
EE	0.9 % for crop production. For seed production 0 %.
ES	0.9 %
FI	Not yet defined
FR	0.9 %
HU	Coexistence measures and rules should be able to prevent any contamination or commingling of GM plants with plants grown by conventional and/or ecological farming methods.
IR	(Draft measures) Oilseed rape = 0.3 %; Maize = 0.5 %; Potatoes = 0.5 %
IT	(Draft measures) For maize two levels of tolerance apply: < 0.01% to guarantee the absence of GMO contamination and 0.9 % to guarantee compliance with the law on conventional production. For soya only one level applies: < 0.01%. The Regions may choose the areas where to apply the different levels of tolerance and the corresponding segregation measures.
LT	0.9 %
LU	Not specified
LV	0.9 %
NL	0.9 %
PL	Not yet defined
PT	The aim of the technical measures is to reduce the adventitious presence of GMO to the lowest possible level. But for obtaining compensation for economic damage due to the adventitious presence of GMOs the threshold is fixed at 0.9 %.
RO	0.9 %
SI	The specific measures for individual plant species will be provided in secondary legislation. The specialized drafts of individual regulations will be prepared considering the maximum tolerance level of GMO admixture is 0.9 %.
SK	0.9 %
SV	0.9 %. It was assumed that the seed for sowing could consist of 0.5 % GMOs.

1.2.2. Spatial segregation measures applying to segregate fields with GM crops from other fields or from other areas.

AT	Not yet defined
BE	Flanders and Wallonia: Not yet defined
CZ	Isolation distances and/or buffer zones are requested. Other parameters (as different flowering times) can be voluntary used by farmers. Isolation distances for maize are 70 m towards non-GM conventional and 200 m towards organic maize fields. Buffer strips of one row of conventional maize (around Bt maize) replace 2 m of isolation distance. The maize in the buffer strip must be handled as a GM crop. For potatoes, isolation distances are between three m and 10 m (depending on the orientation of the cultivation lines) towards conventional and 20 m towards organic potato fields.
DE	For GM maize a minimum isolation distance of 150 m towards non-GM conventional maize fields and of 300 m towards organic maize fields. The grower shall take appropriate measures to prevent the significant impairment of areas on which maize is cultivated that is not GM and is intended to be used for seed. No environmental or other parameters are taken into account.
DK	Segregation is based on isolation distances. No environmental or other parameters are taken into account. Segregation measures to segregate fields with GM crops from fields with conventional and organic crops are identical. However, measures for GM crop production and for GM seed production are different. Isolation distances to crop fields are for maize: 150 m; for potato: 10 m; and for beet 20 m.
EE	(Draft measures) Segregation will be based on isolation distances and buffer zones.
ES	Not yet defined
FI	(Draft measures) Spatial segregation is principally based on isolation distance. If further technical measures prove useful for certain species, more detailed requirements can be given species-specifically. Possible adaptations to local conditions can be introduced by ministerial decree for any given species.
FR	(Draft measures) The cultivation of GMOs is subject to technical conditions, including isolation distances. The technical conditions will be established in a Ministerial Order.
HU	The competent authority defines the isolation distance as well as other cultivation conditions if necessary, including separate field margin harvesting or sowing of conventional border rows. The minimum isolation distance for maize is 400 meters. There are no separate isolation distances for conventional or organic

	farming or for non-GM seed production. The minimum isolation distance is legally defined. However, the competent authority may – based on local natural, geographical and other particularities influencing the cultivation activity – at its sole discretion, establish an isolation distance exceeding the minimum.
IR	(Draft measures) Segregation is based on isolation distances only. Proposed isolation distances: Oilseed rape: not yet specified. Maize: 50 m towards conventional and 75 m towards organic maize fields. Potatoes: 20-40 m depending on the category. No environmental or other parameters are taken into account. Isolation distances to organic fields are increased by 50 % compared to conventional production and those to seed production fields are doubled.
IT	(Draft measures) Spatial segregation measures consist in: compulsory border rows with non-GM crop, isolation distances, and possible additional border rows with a consequent reduction of the isolation distance. For insect resistant GM crops 20 % of the cultivated area has to be planted with non-GM as refuge-areas. Regions may consider areas with particular climatic conditions (windy or extreme and cyclical weather conditions), where the distances can be tripled, or only doubled if there are suitable wind-breaks or other measures to reduce the wind speed and the dispersion of GM material.
LT	A buffer zone of three meters must be established around GM crops where conventional plants of the same species as the GM crops are cultivated and maintained in the same way as the GM crops. Isolation distances are set for sugar beet (50 m), fodder beet (50 m), wheat (50 m), maize (200 m), potatoes (20 m), rapeseed (4000 m), and cross-fertilizing grain (500 m). For fodder beet the isolation distance towards non-GM seed fields is 1000 m.
LU	Segregation is based on isolation distances only. The following isolation distances apply: maize: 600 m; potato: 50 m; beet: 100 m towards non-GM crop fields and 2000 m towards non-GM seed production fields.
LV	Segregation measures consist of isolation distances and buffer zones. Isolation distances are the following: maize: 200 m; beet: 200 m to non-GM crop fields and 1000 m to non-GM seed production fields; potatoes: 50 m; oilseed rape: 4000 m. In addition, the following buffer zones apply: maize: 1.8 m; beet: 2 m; potatoes: 1.3 m; oilseed rape: 3 m. Furthermore, it must be ensured that the seeds of GM crops do not mix with the seeds for organic and conventional farming in the process of preparation and packing of seeds. No environmental or other parameters are taken into account.
NL	The following isolation distances apply towards non-GM conventional fields: potato: 3 m; sugar beet: 1.5 m; maize: 25 m. The following isolation distances apply towards GMO-free fields (i.e. organic fields and production under contract for GMO absence): potato: 10 m; sugar beet: 3 m; maize: 250 m.
PL	Measures not yet determined
PT	Segregation measures include minimum isolation distances (maize: 200 m towards conventional maize fields or 300 metres towards organic maize fields or where products must comply with certain specific and contractually established

conditions with regard to the thresholds of unintended presence of GMOs). These distances may be replaced completely by border rows of at least 24 rows (towards conventional fields) or, to a minimum of 50 metres by border rows of at least 28 rows (towards organic fields). For insect tolerant GM variety refuge areas must be established that are sown with conventional varieties and cover at least 20 % of the total area sown with the GM variety. This band may be also used as a buffer zone. The product obtained from the borders must be included in the product from the GM variety and be labelled as such. The variety to be used in the border must have the same plant cycle as the GM variety.

Use of different plant cycles and/or staggered sowing: Staggered sowing or varieties of different FAO classes may be used: If the varieties of maize of the same FAO class are sown at a minimum interval of 20 days; and/or if the varieties of maize are sown simultaneously, the difference between the respective plant cycles must be at least two FAO classes.

Measures to minimise the unintended presence of mechanical mixtures: Seed packaging: When preparing for sowing and when sowing, the seed packaging of different varieties must be clearly separated and located in different areas of the store, particularly for GM varieties; at the end of the season, unused seed packaging which has been opened must be sealed and identified. Use of seed drill, combine harvester, dryer and other equipment: All equipment must preferably be used by farmers dedicated to the same production system; in order to avoid the dispersal and mixture of grain from the previous operation, where different production systems are used, seed drills, combine harvesters, dryers and other equipment used must be carefully cleaned after being used in fields cultivated with GM varieties. Combine harvesters, when shared with other farmers dedicated to other production systems or when used by the same farmer to harvest conventional varieties, must, after harvesting a field cultivated with a GM variety, harvest at least an area of 2 000 m<sup>2</sup> of a conventional variety whose production will be labelled as GM.

Storage, transport and identification of products produced: The farmer must guarantee the physical separation of maize lots produced using different production systems, from their harvesting to their storage or delivery to the marketing or processing installations; Maize lots of GM varieties must refer to the variety and unique identifier.

Farmers may be exempted from having to apply the measures to minimise the unintended presence of pollen or mechanical mixtures if they voluntarily join together to create production areas exclusively dedicated to the cultivation of GM varieties deriving from the same GMO; or when agricultural products produced on a particular farm or in a particular region, both from GM varieties, whether or not deriving from the same GMO, and from conventional varieties, are intended to be mixed in lots to be labelled as GM. In areas bordering a production area, farmers cultivating GM varieties must comply with the technical measures established in the legislation.

RO	Minimum isolation distances have to be respected (for maize: 200 m). Further measures include the creation of a buffer area and staggered sowing time.
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	During crop harvest, transport, storage and conditioning of GM production, operators shall take all necessary measures to prevent the physical mixture of the GM products with non-GM production: separate storage, cleaning of sowing and conditioning machines, means of transport, according to standards for seed production.
SI	The isolation distances and buffer zones are foreseen by the legislation in place. Details will be defined in secondary legislation. Farmers may also choose to use other measures in cultivating GM crops. There are no different segregation measures planned to segregate fields with GM crops from fields with non-GM crops and non-GM seeds. The possibility to have different isolation distances and buffer zones towards organic and conventional farming is still a matter of debate.
SK	Isolation distances have to be respected to non-GM fields of the same species, which are for maize 200 m towards conventional crops and 300 m towards organic crops. Isolation distances can be replaced by buffer strips. For maize, 1 line of buffer strips (non-GM maize) replace 2 m of isolation distance. Buffer strips must consist of 6 lines as a minimum. The buffers trip is harvested together with GM production and marked as GM. For maize, it is also possible to use different maturity classes in agreement with the neighbour.
SV	Detailed segregation measures have only been set for maize and potatoes. Isolation distance to non-GM fields of the same species have to be respected (Potatoes: 3 m, maize: 50 m). The SBA can grant exceptions from the distances if there would be e.g. geographical or other aspects that could be found reasonable. For seed production, the general seed production rules apply.

### 1.2.3. Operators responsible for the implementation of the segregation measures

AT	GM crop growers have the responsibility for the implementation of segregation measures. No specific rules have been defined for non-GM seed production.
BE	Flanders and Wallonia: Primarily, the GM crop grower is responsible for the implementation of the segregation measures. Secondly, also contractors will have certain obligations. Non-GM crop growers also have limited obligations
CZ	GM crop growers are responsible for applying segregation measures. Seed producers (according to seed legislation) are responsible for segregation measures for the production of seeds.
DE	GM crop growers are responsible for implementing segregation measures. In the case of non-GM seed production the seed producers are responsible for implementation of appropriate additional measures.
DK	Generally, the producers of GM crops are responsible. In a coexistence situation with non-GM seed production it would still be the responsibility of the GM crop producer to implement the coexistence rules, whereas the non-GM seed producer would be responsible for adhering to the general seed production rules as usual.

EE	(Draft measures) Any person, who commercially cultivates, handles or transports GM crops, shall ensure that vehicles, machinery, materials, etc. used for sowing, harvesting, transporting, etc. GM crops are cleaned so that no dispersal to conventional or organic crops can take place. Storage facilities that have been used to store GM crops shall be cleaned before being used to store conventional or organic crops.
ES	(Current situation) GM crop growers are not obliged to implement mandatory segregation measures. However, GM crop growers have to use certified seeds and must apply the good agricultural practices and recommendations given by the seed providers. Farmers wishing to obtain a GMO-free harvest have to adopt the appropriate segregation measures. Seed producers are responsible to implement measures to comply with the varietal and GM impurities. The isolation distances stipulated in the seeds Directives are considered to be sufficient to comply with seed thresholds if they were set at levels different from zero.  (Draft measures) GM crop growers will be responsible for implementing segregation measures.
FI	(Draft measures) The GM crop grower is the sole actor responsible for fulfilling the statutory isolation distances. All actors involved in the actions within the scope of the draft law shall fulfil the general requirements of diligence, segregation, cleaning etc in the handling, storage and transportation of GM plant materials, as imposed in the draft law. In general, seed producers are not treated differently from other growers in the draft law (however, see point 1.4.1).
FR	GM crop growers are responsible for the implementation of the segregation measures. The rules concerning the non-GM seed production are unchanged. There are no specific rules in case of seed coexistence with a GM crop grower.
HU	GM crop growers are responsible for the implementation of the segregation measures. If the isolation distance extends the GM crop grower's field, a written declaration is required from the neighbours to agree with the GM crop cultivation. In this case, neighbours are also responsible for not growing sexually compatible plants during the validity of the GM crop cultivation consent.
IR	(Draft measures) GM crop growers are responsible for the implementation of the segregation measures. In a coexistence situation with non-GM seed production both the seed grower (standard certification requirements) and the GM crop grower are responsible.
IT	(Draft measures) Farmers and other operators mentioned in the coexistence plan are obliged to respect the measures contained therein.
LT	GM crop growers are responsible for compliance with isolation distances and have the responsibility in a coexistence situation with non-GM seed production as well.
LU	GM crop growers are responsible for the implementation of the segregation

	measures.
LV	GM crop growers are responsible for the implementation of segregation measures.
NL	GM crop growers are responsible for the implementation of the segregation measures, also in the case of coexistence with seed production.
PL	Measures not yet determined
PT	The GM crop grower is responsible for the implementation of the segregation measures. In case of seed production is up to the seed producer to fulfil the seed requirements rules in conjunction with the farmer cultivating GM varieties.
RO	GM crop growers are responsible for the implementation of segregation measures.
SI	(Draft measures) The GM crop grower is responsible for the implementation of the segregation measures. The isolation distance between GM crops and non-GM seed production will be identical to the distance between crop fields and fields for seed production.
SK	GM crop growers are responsible for the implementation of segregation measures.
SV	The coexistence legislation is directed towards operators that is or will grow and/or handle GM crops. According to Regulation (EC) No 1829/2003, to determine GMO admixture to be adventitious or technically unavoidable, operators must be in a position to supply evidence to satisfy the competent authority that they have taken appropriate steps to avoid presence of GM material above the threshold of 0.9 %. This means, for example, that farmers or other operators have the responsibility to be cautious when, for example, sharing equipment or storage facilities.

1.2.4. Measures required during seed handling, seeding, cultivation (other than spatial segregation measures), harvest, post-harvest operations, transport, storage and further processing

AT	Measures not yet determined
BE	Flanders: Measures not yet determined
	Wallonia: Measures not yet determined
CZ	No specific coexistence measures apply.
DE	In order to protect against dispersal into external plots of land, especially by means of the effects of the weather or conveyance by animals, the grower shall store (1) GM seed or planting material in sealed or thoroughly well covered containers and separate from non-GM seed or planting material of the same kind,

	<p>(2) harvested produce of GM plants – where these contain parts capable of re-production – in sealed storerooms or such that they are thoroughly well covered. The containers and storerooms shall be labelled. If the harvested produce is stored on a plot of land registered in the federal site register for GMOs, the labelling is not obligatory.</p> <p>Transport: In order to protect against dispersal into external plots of land, especially by means of dispersal by wind, the grower shall transport (1) GM seed and planting material in sealed containers, (2) harvested produce of GM plants – where these contain parts capable of re-production – in sealed vehicles or, when transported on vehicles with open loading areas, such that they are thoroughly well covered. If GM seed, planting material or harvested produce are spilled during loading or transport it must be added back to the same seed, planting material or harvested produce, separately utilised or destroyed.</p> <p>Cultivation measures: In the course of all cultivation measures, including harvesting, a suitable technique shall be used to keep dispersal of GM produce into external plots of land to the minimum possible level.</p> <p>Objects employed: The GM crop grower shall diligently clean facilities, machinery and equipment employed in the sowing, harvesting, processing or transport of seed, planting material or harvested produce that has been GM before they are used for seed, planting material or harvested produce that has not been GM.</p>
DK	No specific measures between GM crops, but cultivation intervals between GM and non-GM crops and volunteer and bolter control for certain crops.
EE	(Draft measures) See point 1.2.3. A party, who acquires or otherwise takes over the right to use land, on which GM crops have been cultivated, shall assume responsibility for control of volunteers and the duty to maintain the cultivation intervals laid down for the crop concerned.
ES	<p>(Current situation) GM crop growers have to use certified seeds to guarantee the purity and quality of the harvest. Farmer must apply the good agricultural practices and recommendations given by the seed marketers. The technical guidelines agreed with the seed producers association (APROSE) and distributed amongst farmers recommend growing conventional maize refuges for Bt maize fields larger than 5 hectares (prevention of resistance against Bt maize), and measures to control adventitious plants.</p> <p>(Draft measures) It is planned, amongst others, to request GM crop growers to implement the following measures: (a) during cultivation: isolation distances, buffer zones, refuge zones, pollen barriers, appropriate crop rotation, volunteer control, programme of the crop production cycle, soil tillage to reduce GM seed banks, use of varieties with reduced pollen production or with sterility, sowing machinery cleaning before and after being used by GM growers, careful sorting, processing, packaging, labelling and segregated storage of GM seeds; (b) during harvest: machinery cleaning before and after harvesting, sharing of harvesting machinery between farmers cultivating the same production type, reducing harvesting losses (e.g. maize grains); (c) during transport and storage:</p>

	segregation during transport and storage of GM and non-GM harvest.
FI	(Draft measures) General measures for segregation in storage, cleaning of equipment and facilities in common use etc. are given in the draft law. Measures to be followed after GM crop cultivation (e.g. ways of tilling, weed and volunteer control, time interval required before non-GM crop cultivation with the same species is allowed) are dependent on the plant species and shall be determined at the level of species-specific Decrees.
FR	(Draft measures) According to the law, harvest, transport and storage of GMOs will be subjected to technical conditions. These conditions will be defined in a Ministerial Order.
HU	<p>Growers with a licence to grow GM plants must comply with the following provisions regarding the production of GM crops: (a) application of crop rotation, (b) co-ordination of production cycle with neighbouring growers, (c) elimination of volunteers, in the year or years following the production cycle on cases where it can cause economical damage, (d) the roads, sides, ditches bordering the field, the floor areas and storage places must be kept clean and tidy, (e) in order to prevent any admixture between the conventional and organic crops with GM crops, the machinery and tools used for growing and harvesting must be kept clean, and special attention must be given to clean the tools after they were used to work with GM crops, including the disposal of cleaning waste.</p> <p>The grower and those who are involved in storage and delivery must (a) in the case of storing GM crops, prevent any admixture with other crops or products, and by doing so, in particular, arrange a physical separation from other crops and thoroughly clean the warehouses, bins, and other storage places used for GM crops after the product was removed, including the disposal of cleaning waste, (b) in the case of the delivery of GM crops, prevent losses, leakage, and admixture with other products, and by doing so, in particular, arrange a physical separation from other products and thoroughly clean the vehicles or tanks used to deliver GM crops, including the disposal of cleaning waste.</p>
IR	(Draft measures) All of the above is to be carried out to a Code of Good Agricultural Practice
IT	<p>(Draft measures) The following measures apply: (1) GM seeds have to be stored in separated rooms and in whole packages and appropriately labelled. GM seeds have to be transported in closed transporters. (2) Seed-drills and harvesting machinery used for GM crop cultivation have to be cleaned immediately and carefully after the seeding or harvesting operations and must be identifiable in specific registers. In the case of shared use among several farmers the machinery can, within the same season, not be used for non-GM seeds. (3) GM and non-GM products have to be kept separate during transport, storage, processing and other operations carried out with GM products up to the first point of sale and with the use of machines seasonally reserved for either type of production and clearly identifiable by specific registers.</p> <p>Where two sexually compatible GM events are cultivated on the same farm or on neighbouring farms at the same moment, to minimize the risk of generating a</p>

	<p>descendant which has an increased rate of the transgenic protein and/or a combination of events not authorized, the Region or the Autonomous Province will be able to establish mandatory isolation distances between corresponding fields. Damage originating from the intrusion of wild animals into GM crop fields, where part of the production (including non-mature production) has been removed, has to be communicated immediately to the Region as competent authority. Residues or other material remaining from GM production may not be removed or collected by non-authorized operators. The responsible for the GM crop cultivation has to take all useful precaution to avoid intrusion into the GM field. Isolation distances have to be observed between GM crops and closed areas specifically created for the production of sexually compatible non-GM seeds.</p>
<p>LT</p>	<p>Sowing: Agricultural machinery and implements used for sowing GM crops must be cleaned when further used for sowing non-GM crops. GM seed in a package that was not used, but that may be used for other sowing seasons, must be sealed and entered into a register. In the register the GM crop growers must specify the sowing date, purpose of GM crop harvest, precise amount of the seed sowed, the area sowed and the amount of unused seed.</p> <p>Cultivation: farmers may not in the same year cultivate within the minimum isolation distance from the GM plants non-GM rapeseed or other plants of the cruciferous family of the same family, genus or species as the GM crop and non-GM cereals and beetroot of the same genus and species, and non-GM potatoes, maize, soy and beetroot of the same species (these requirements shall not apply if the conventional plants mentioned therein are cultivated and maintained as GM crops). Non-GM plants may be sowed within the minimum isolation distance not earlier than before a crop-specific time interval. Buffer zones (planted with non-GM crops of the same species) of at least three meters in width must be planted around GM crop fields. GM crops may not be cultivated within a 5-km radius around apiaries.</p> <p>Harvest: Agricultural machinery and implements used for GM crop maintenance and GM crop harvesting must be cleaned. GM crops and their buffer zones must be carefully maintained and cleared of weeds. Fields where GM plants were cultivated must be monitored during a specified minimum period, removing all sprouts.</p> <p>Transport: Vehicles used for transportation of GM harvests must be cleaned carefully after transportation of the said harvest when further used for transportation of non-GM crop harvests to remove all residual soil, seeds and plants. GM harvests must be transported so as to avoid spillage and the like and using special closed type vehicles for this purpose.</p> <p>Storage: GM harvests must be stored separately from non-GM products.</p> <p>Processing: Purifying, drying, loading and packing equipment should be used for processing of GM harvests exclusively, otherwise it must be cleaned. When loaded into or unloaded from storage, GM harvests must be monitored to avoid spillage or damage to packages (if any), in the case of which the area must be cleaned thoroughly. After the disposal of GM harvests, the premises must be cleaned thoroughly if further used for storage of non-GM products.</p>

LU	Sowing and harvesting machines must be cleaned.
LV	Volunteers of GM crops must be controlled if there is a risk of their out-crossing with non-GM crops, except for the cases when the owners or users of the neighbouring fields provide a written co-ordination document stating that they do not object to an accidental admixture of GM crops.
NL	(Draft measures) Good agricultural practices and monitoring
PL	Measures not yet determined
PT	See point 1.2.2. At present, only technical measures for maize are established, and for this species no specific measures for temporal cultivation intervals or post harvest operations are required.
RO	During harvest, transport, storage and conditioning of GM crop production GM crop growers shall take all necessary measures to prevent the physical mixture of the GM products with non-GM production: separate storage, cleaning of the sowing machines, of the conditioning machines, means of transportation. Seed legislation applies for the production of seed. Companies provide complex stewardship programs in view of complying with traceability rules (seed bag labelling, storage, technical guides). Farmers growing GM crops shall use certified seeds only.
SI	(Draft measures) If a GM crop producer also cultivates on the same agricultural holding non-GM plants of the same species as the GM crop, he must ensure that the GM crop propagating material is physically separated from the products of the non-GM plants before and during sowing or planting, and that the GM crop products are physically separated from the products of the non-GM plants during harvesting, transport, storage and processing, or that all non-GM plants of this species, and their products, are labelled in accordance with the regulations governing the labelling of GMOs. For the harvest, transport, storage or processing of GM crops, a producer must use machinery, installations, equipment and transport and other means other than those used for non-GM agricultural plants, or must, after each instance of their use with GM crops, subject them to deep cleaning. The GM crop producers must take into the consideration the crop rotation and destroy volunteer plants, if such measures will be provided in a regulatory Act.
SK	GM crop growers are obliged to observe the isolation distances, destroy volunteers around the production field, and ensure the cleaning of all equipment, which was used in connection with GM seeds and GM production. Separate storage is required for GM seeds and production and non-GM material, as well as separate treatment and processing.. Two years after cultivation farmers have to monitor the vicinity of fields and destroy the living GM plants. Non-GM plants of the same species cannot be grown for two years on plots, where GM crops were cultivated.
SV	If GM potatoes have been cultivated on a field this information has to be passed on to any other farmer who will use that field within the next two years. If the

	<p>next farmer is not known, the owner of the land has to be informed. Measures should be taken when transporting a GM crop or product to ensure that there is no risk of GMOs being spread to non-GM crops, which could cause economic damage as a result of labelling the affected products as GM. For the same reason vehicles, machinery, sorting equipment, tools etc. must be cleaned prior to use with non-GM crops or products.</p>
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#### 1.2.5. Application of segregation measures; Agreements between neighbours not to apply segregation measures

BE	<p>Flanders: GM crop growers are also given the opportunity to agree with neighbouring farmers within the notification distance (being larger than the technical isolation distance) to commit to a buy up of contaminated fields. Neighbouring operators can, under the condition that they did not appeal after the GM crop grower's notification, agree not to apply segregation measures, but only at their own risk and expense. If they appealed, based on a reasoned economic interest, and the appeal was accepted by the committee (evaluating the 'reasoned economic interest'), the risk and compensation for any possible damage due to the cultivation within the isolation distance is for the GM crop grower</p> <p>Wallonia: Neighbouring operators can decide not to apply segregation measures. The neighbouring non-GM crop has, however, to be labelled as GM, whatever the level of contamination, as this contamination is no more "adventitious or technically unavoidable".</p>
CZ	Segregation measures are obligatory.
DE	GM-crop growers do not have to observe the coexistence obligations towards a third party if the said third party has agreed in writing to renounce his protection or has not provided, on request, the information necessary for his protection and the obligation serves in that particular case solely to protect that third party. The deviation from the principles of good farming practice shall be declared to the competent authority in good time before sowing or planting.
DK	Neighbouring operators may jointly decide not to apply the otherwise mandatory isolation distances. In such events they must sign a written agreement before sowing of the GM crop.
EE	(Draft measures) Requirements concerning the isolation distances may be deviated from if there is a written agreement with the party or parties concerned, which is to be signed before the GM crop is sown. A party which acquires or otherwise takes over the right to use land on which GM crops have been cultivated shall assume responsibility for the control of volunteers and the duty to maintain the cultivation intervals laid down for the crop concerned.
ES	(Draft measures) Neighbouring operators can decide not to observe isolation distances although they should still comply with other requested measures.
FI	(Draft measures) GM crop growers may deviate from the obligatory isolation if

	this has been agreed with the neighbour. In such cases, however, compensation of possible economic losses due to GMO admixture shall not be compensated on the ground of this draft law.
FR	Measures not yet determined
HU	The application of segregation measures is obligatory. However, farmers are allowed to submit an application for GMO cultivation jointly providing if the fields where they intend to grow GMOs are next to each other. In this case the competent authority treats the fields as one entity and one decision will be issued – therefore, segregation measures between the fields of the joint farmers are not necessary. Procedures, segregation measures are presented under point 1.2.2.
IR	(Draft measures) Segregation measures are obligatory.
IT	(Draft measures) Segregation measures are obligatory.
LT	GM crop growers may not observe the minimum isolation distances if GM plants are cultivated in adjoining fields or the harvest of crops cultivated by neighbours is not intended to be placed on the market, or it will be labelled as GM. In this case, the GM crop grower must inform neighbours about the coexistence requirements, providing them the copies of the crops plans, and obtain the consent of the neighbours in writing.
LU	Segregation measures are obligatory.
LV	Neighbouring operators may jointly decide not to apply segregation measures, when the owners or users of the neighbouring fields give a written co-ordination document stating that they do not object to an accidental admixture of GM crops.
NL	Segregation measures are obligatory.
PL	Measures not yet determined
PT	See point 1.2.2.
RO	Segregation measures are obligatory.
SI	GM crop growers and their neighbouring farmers may jointly decide which measures will be applied before an application for GM crop cultivation will be submitted. The segregation measures listed in the application are then obligatory.
SK	Farmers have the responsibility to observe all duties of the coexistence law.
SV	The purpose of the regulation is to prevent a non-GM crop grower to suffer economic damage deriving from having to label a product as GM. Neighbouring farms that both grow GM crops do not need to maintain safety measures between them. A GM crop grower can agree with a neighbouring farmer not to observe the isolation distances between their fields. In that case any admixture in the non-GM product could not be considered adventitious or technically unavoidable. Similarly, a GM crop grower does not have to implement segregation measures

	within his own farm.
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### 1.3. Rules and procedures in cases of GMO admixture and/or damage

1.3.1. Notification requirements applicable for operators in cases where GMO presence is observed in non-GM products or elsewhere in the environment (labelling requirements according to Community legislation are not considered here)

AT	No such requirements exist in some regions. In others, owners or users of areas, on which GM crops are not cultivated, are obliged to report suspected cases of contamination with GMOs to the public authorities.
BE	Flanders and Wallonia: No specific notification requirements. However, a GM crop grower has to notified any unexpected or abnormal event occurring within a GM-crop or in the neighbouring environment
CZ	No specific notification requirements
DE	No specific notification requirements. The coexistence monitoring in general is exercised by the holder of the authorisation for placing the GMO on the market and the state authorities.
DK	No specific notification requirements
EE	No specific notification requirements
ES	(Draft measures) Farmers will have to notify the regional competent authority any problem or difficulty in applying the coexistence measures, or any other conflict that may be derived from co-existence.
FI	(Draft measures) No specific notification requirements
FR	No specific notification requirements. However, in application of the rural code, any abnormal event or negative effect which could be linked to the release of GMOs shall be reported to the plant protection services.
HU	Should a consent holder acquire important new data relating to the GMO or to the gene technological activity for which its consent has been granted, it shall inform the relevant gene technology authority without delay.
IR	No specific notification requirements
IT	No specific notification requirements
LT	In the case of mixing or cross-breeding of GM plants with conventional and organic plants or in the case of spillage of GM plants or their products, when GMO presence exceeds 0.9 %, competent national supervisory bodies must be

	informed of the incident.
LU	No specific notification requirements
LV	No specific notification requirements
NL	No specific notification requirements
PL	(Draft measures) If the presence of GMOs is observed in official controls the inspectors must inform the competent authority.
PT	No specific notification requirements
RO	No special notification requirements
SI	The Inspection Service for Agriculture, Forestry and Food should be informed if an authorised GMO is present in non-GM products. The inspector will decide whether the crop is considered damaged or not (and if the damage is unintentional or not). If GM crops are found elsewhere in the environment the Inspection for Environment should be informed.
SK	No special notification requirements
SV	No special notification requirements

### 1.3.2. Rules applying in relation to the compensation of economic damage that may result from GMO admixture

	<p>Some regions (Länder) have no specific provisions on compensation.</p> <p>Other regions stipulate that GM crop growers have to grant compensation in cases of illegal cultivation. The damage has to be calculated according to the market value of non-GM crops. To the extent that damaged products can still be used, the resulting revenue has to be deducted. A limitation of the market value of the damaged product that would have resulted from other factors, in particular climatic conditions, has to be deducted. Should it become necessary to plough the land and re-plant it with other crops, the associated costs have to be compensated. The damaged party has to complain within two months from obtaining knowledge of the damage.</p> <p>In some regions, public authorities may implement necessary emergency measures to prevent out-crossing with GM crops in the cases of illegal or inappropriate cultivation. The resulting costs have to be compensated by the GM crop grower.</p> <p>In one region, in cases of contamination of products with GMOs, where the responsible for the contamination cannot be determined, damaged parties may receive compensation by the regional Government.</p>
AT	
BE	

Flanders: A compensation fund is fed by contributions from GM crop growers

	<p>(amount still to be determined). Farmers having experienced economic loss due to GMO admixture above 0.9 % can apply for a compensation, but several conditions have to be met: (1) principally only damage outside the isolation distance (exception foreseen when an appeal of a non-GM crop grower inside the isolation distance was overruled); (2) application for compensation is restricted in time (before 30 June of second calendar year after the harvest); (3) the applicant may not cultivate himself GM varieties of the same damaged plant species; (4) the damaged plant species has to be the same as the plant species on the GM crop field within the notification distance; (5) if hard evidence was provided that the damage could not be caused by the GM crop field within the notification distance (for example other GM event); (6) the applicant himself needs to comply with all the legislation and may not be negligent. The fund may also recover paid compensations at a later stage if new evidence comes up. Applications for compensation are dealt with by a committee of administration, scientists and experts. The overall civil liability legislation still applies in all (other) cases.</p> <p>Wallonia: (Draft measures) A compensation fund is in place to compensate economic damage resulting from GMO admixture of the harvested product. Economic damage is defined relatively to legal labelling thresholds (conventional or organic farming). The procedure is still to be defined. There are no specific requirements for compensation, except if the GM and non-GM crop of the same species are grown by the same operator. In that case compensation applies only if the operator can prove that GM crop was grown in accordance with the legal prescriptions. The level of compensation will be decided by an ad-hoc commission, on a case-by-case basis. The right of a farmer suffering contamination of his harvest to proceed to the tribunal is maintained. If an operator is found responsible for any fault, the expenses of the compensation fund will be reclaimed.</p>
CY	When a deliberate release into the environment of GMOs occurs and causes damage into the environment, public health, or private property the operator can be charged with an offence. The court can also order the submission of all expenses for damage restoration.
CZ	In relation to GM crop cultivation the general civil liability legislation applies.
DE	Farmers growing GM plants are liable for all economic losses incurred on neighbouring farms due to unwanted admixture regardless of whether or not a direct link can be ascertained. An economic loss occurs when a neighbouring farmer's harvest exceeds the 0.9 % threshold for GM content that makes it illegal to sell the harvest without a GMO label. Farmers growing GM crops are still liable even if they followed the codes of good agricultural practice designed to prevent out-crossing and admixture.
DK	Specific liability and compensation legislation has been established for farmers who suffer an economic loss due to GMO admixture. In order to receive compensation the GM field must be cultivated within a certain distance from the non-GM field and in the same growing season, which is greater than the crop-specific isolation distances. Also the GMO trait that has been identified in the non-GM crop must be identical to the cultivated GM crop. The content of GMO

	<p>in the non-GM crop must exceed 0.9 % on a whole field basis. Organic farmers can also receive compensation if they suffer a loss even though their field is outside the compensation distance. That is if the seeds they sowed contained GM seeds. Farmers must send their compensation claims to the Danish Plant Directorate no later than 14 days after the GMO presence in non-GM products was discovered. Claims received after 1 August the year after the harvesting year will not be accepted. The fund is financed by the GM crop growers through the cultivation fee (13 Euro per hectare with GM crops).</p>
EE	<p>Losses caused by illegal introduction of GMOs to the environment, illegal marketing of GMOs or products, failing to fulfil the obligation of notification or failing to comply with the rules of handling GM crops will be compensated according to the Law of Obligations Act.</p>
ES	<p>The general civil liability legislation applies. Furthermore, if adventitious GMO presence is found in non-GM fields, the corresponding regional administrative law will apply. For any claims, operators must provide legally acceptable evidence.</p>
FI	<p>(Draft measures) Losses caused by admixture of GM plant materials with non-GM plant varieties in conventional or organic production may be compensated by the State on certain preconditions: if it is likely that the damage results from the cultivation of GM crops and does not result from the acts of the party suffering the damage. Damage is compensated if the GMO admixture exceeds the limits imposed on such products of cultivation (or the products made thereof) in EC product legislation with the consequence that the products either are not permitted to be marketed at all or can only be marketed labelled as GM products. Additionally, costs of the necessary investigations, sampling etc. shall be compensated for the conventional or organic grower in question. For an organic grower also costs of the actions necessary for restoring the genetically mixed plantation to the condition stated in community legislation on organic agriculture shall be compensated, as well as costs caused by the reversion of his plant cultivations or animal production to the conversion period defined in Regulation (EEC) No. 2092/91. The compensation can be applied for from the Finnish Food Safety Authority Evira within one year after harvesting the damaged yield, and the application should present sufficient clarification of the damages. If the damage has been caused by the GM crop grower due to neglect or omission (i.e. as the result of not complying with the measures stated in the draft law), the Finnish state has a right of recourse towards the GM crop grower. Provided gene flow from other growers' GM fields has changed seed to an extent that the statutory seed thresholds are exceeded and the harvested seed cannot any more be used for sowing seed, the economic losses caused thereby for the seed producer are included in the compensation regime in the draft law.</p>
FR	<p>The GM crop grower is responsible in case of economic damage even if no fault has been made. Economic damage is defined to occur when the EU threshold of 0.9 % is exceeded in a production obtained on a field located close to a GM crop field and grown in the same year. The damage is defined as the difference between the price of the GM product and the price of the non-GM product. The conditions and procedure will be defined in a decree. The GM crop grower must subscribe a financial guarantee. The general civil liability legislation applies for</p>

	other kinds of damages.
HU	The liability rules for damage resulting from activities involving increased risk of the Hungarian Civil Code should be applied for damage occurring from the cultivation of GM crops, unless the aggrieved party has given its prior written consent to the GMO cultivation, in which case the general liability rules of the Civil Code shall be applied. The aggrieved party can also claim compensation for non financial loss. The proof of actual admixture is required; therefore the loss of a farmer whose customers only fear that his products are no longer GMO-free is not recognized as compensable. A compensation fund compensating harm resulting from GMOs is not foreseen.
IR	Measures not yet determined
IT	(Draft measures) Damage originating from non-compliance with the coexistence plan has to be compensated. Specific rules apply for the compensation of damage resulting from a mixture that can not be charged to individual responsibilities. Specific insurance instruments from producers are considered to cover costs resulting from the responsibilities and damages caused. A producer is excluded from any responsibilities if using certified non-GM seeds. Furthermore the guidelines foresee the creation of a specific fund for the compensating of economic damage resulting from the presence of GM material in other products or soils that cannot be compensated under civil liability rules. The claimant has to prove economic damage by the presence of GM material in his own product or his own soil. The following losses can be compensated: (a) price reduction of the agricultural product due to the presence of GM material (the amount of the compensation is limited to the difference of the market price between the product which has to be labelled as GM and a non-labelled product), (b) test costs and indirect losses resulting from the change of market channels.
LT	Farmers shall be liable for non-compliance with the coexistence rules. No specific rules or mechanisms for compensation have been defined in relation to GM crop cultivation.
LU	GM crop growers are responsible for any economic damage that may occur from their GM crops. General civil liability applies.
LV	GM crop growers shall compensate the incurred economic losses to the amount specified by the court if these have arisen from non-compliance with coexistence requirements.
NL	(Draft measures) A fund covering residual damage is under construction.
PL	The general civil code applies.
PT	Compensation will be granted by a fund for economic damage arising from accidental contamination due to the cultivation of GM varieties. This compensation fund applies to agricultural products, not transformed, in the first phase of market placement, which have been verifiably mixed, in levels above 0.9 %, with the same GMOs that are contained in the cultivated GM varieties.

RO	There are no specific provisions concerning the compensation of economic damage that may result from GMO admixture. The general civil code applies.
SI	If the person who has damaged the crop is known, the general civil liability law is applied. Otherwise the Republic of Slovenia takes over the responsibility for damage, on the basis of the notification of a farmer suffering damage. The amount of the damage is determined as the price difference (GM versus non-GM products) and other costs related to farming where GMOs are not allowed. The Committee at the Ministry of Agriculture, Food and Forestry determines the amount of compensation. If there is no consensus, the court for civil matter is involved.
SK	There are no specific provisions concerning the compensation of economic damage that may result from GMO admixture. The general civil code applies.
SV	The general civil code applies.

### 1.3.3. Availability of insurance cover on the market for economic risks related to GMO admixture

BE	Flanders and Wallonia: No insurance available
CY	No insurance available
CZ	No information available on such insurance
DE	No insurance available
DK	No insurance available. Until insurance will be available the Danish compensation fund will pay for economic losses due to GMO admixture if the specific compensation rules are complied with.
EE	No insurance available
ES	No information available on such insurance
FI	No insurance available
FR	Insurance cover is not yet available on the market but some insurance companies are preparing insurance products.
HU	No insurance available
IR	No insurance available
IT	No insurance available
LT	No insurance available

LV	No insurance available
NL	No insurance available
PL	No insurance available
PT	No insurance available
RO	No insurance available
SI	No insurance available
SK	No insurance available
SV	No insurance available

#### 1.3.4. Obligatory subscription of an insurance

AT	Insurance cover can be requested by the competent authority in some regions as a condition to grant authorisation for the cultivation of GM crops. Where no insurance cover is available, sufficient financial guarantee may be requested. In other regions, such requirements do not exist.
BE	Flanders and Wallonia: Subscription of an insurance is not obligatory
CY	(Draft measures) Subscription of an insurance is not obligatory
CZ	Subscription of an insurance is not obligatory
DE	Subscription of an insurance is not obligatory
DK	Subscription of an insurance is not obligatory
EE	(Draft measures) Subscription of an insurance is not obligatory
ES	(Draft measures) Subscription of an insurance is not obligatory
FI	(Draft measures) Subscription of an insurance is not obligatory
FR	The subscription to a financial guarantee is mandatory. This can include an insurance but also other types of financial guarantee. A decree will define the different possibilities.
HU	Subscription of an insurance is not obligatory
IR	(Draft measures) Subscription of an insurance is not obligatory
IT	(Draft measures) The guidelines foresee the obligation to contract a policy of insurance or a guarantee before seeding.

LT	Subscription of an insurance is not obligatory
LU	Subscription to insurance or special compensation fund is mandatory.
LV	Subscription of an insurance is not obligatory
NL	Subscription of an insurance is not obligatory
PL	(Draft measures) Subscription of an insurance is not obligatory
PT	Subscription of an insurance is not obligatory
RO	Subscription of an insurance is not obligatory
SI	(Draft measures) Subscription of an insurance is not obligatory
SK	Subscription of an insurance is not obligatory
SV	Subscription of an insurance is not obligatory

#### 1.4. Restrictions for the cultivation of GM crops

##### 1.4.1. Regions where GM crops may not be grown, or where specific authorisation procedures apply

AT	In regions (Länder) requiring an authorisation for the cultivation of GM crops, such authorisation will only be granted by the competent regional authority in certain protected areas if the aim of protection of these areas is guaranteed and/or wild animals and plants as well as natural habitats are not damaged. In some regions, specific protection is provided for certain protected areas, including the alpine region and/or mountain pastures, glaciers and their catchment areas, swamps, reed and riverside forest areas, areas managed under contract nature protection schemes, will only be granted by the competent regional authority if the aim of protection of these areas is guaranteed. In some cases, the cultivation of GM crops requires in specific authorisation in certain protected regions. Cultivation is not allowed in areas of organic farming, and in areas where a risk of out-crossing with non-GM production exists. In some regions, public authorities may designate regions, where, according to the current scientific knowledge appropriate segregation measures cannot prevent out-crossing with GMOs. Only two regions do not have specific procedures for different regions.
BE	Flanders and Wallonia: no specific procedures for different regions
CY	GM crops may not be grown in Natura 2000 areas and Specially Protected Areas (SPAs)
CZ	no specific procedures for different regions
DE	no specific procedures for different regions

DK	no specific procedures for different regions
EE	no specific procedures for different regions
ES	There are no specific procedures for different regions, however, the Autonomous Regions may adapt the general co-existence measures according to their particularities, including the possibility for more restrictive measures or bans, provided this is in compliance with the EU legislation.
FI	Cultivation of GM plant material of a certain plant species or variety can be restricted or prohibited within a geographically restricted area important for its seed production, provided that the purity requirements for seed production in the Finnish Seed Trade Act cannot be reached by other measures provided in the present draft law. Restriction or prohibition will be enacted by a ministerial decree by the Ministry of Agriculture and Forestry.
FR	The natural parks can exclude the cultivation of GM crops with the unanimous agreement of the concerned farmers, and if this possibility is included in their charter.
HU	Applications to grow GM crops will be assessed, amongst others, according to regional criteria. Goal of the authorisation process is to enable competent authorities to define cultivation conditions taking into account local circumstances as well as special characteristics of the plant species: (a) cross-pollination of specific species and varieties (if there are similar species/varieties from taxonomical aspect in the vicinity of the field used to grow genetically modified plants), (b) the purpose of the utilisation, (c) the vegetation period, (d) propagation biological characteristics; inclination for interspecific cross-breeding with non-GM species, (e) following regional characteristics: (1) the prevalence of the genetically modified species/varieties to be grown, the size of acreage compared with non-GM plants in the actual region, (2) the shape and size of the field (compared to what is characteristic in the region), (3) characteristic climatic conditions of the region, (4) characteristic topographic features of the region, (5) factors influencing pollination and the gene flow via pollen, (6) the distance from protected and sensitive natural areas and those of the Natura 2000 areas. The nature conservation authority may suggest isolation distances towards areas under environmental protection, environmental sensitive areas or Natura 2000 areas. These isolation distances can be wider than the ones to non-GM crop fields but shall not exceed the double of those. Furthermore, the nature conservation authority may suggest special cultivation conditions in order to ensure compliance with the EC legislation on the conservation of natural habitats and of wild fauna and flora and on the conservation of wild birds as well as with the rules included in national legislation on designation of protected areas and on environmental sensitive areas. The granting of the consent for cultivation can only be refused if compliance with the above mentioned rules can not be ensured even by such special cultivation conditions.
IR	no specific procedures for different regions
IT	(Draft measures) The cultivation of GM crops is excluded from the following

	<p>areas: protected areas, Natura 2000 areas: SAC – Special Areas of Conservation, SCI – Sites of Community Importance, areas for the protection of biodiversity, sites of conservation of agronomic biodiversity identified within the meaning of the regional laws or rules, and, where existent, the summer dike basins. GM crops that are sexually compatible cannot be grown in areas focussing on quality production (PDO, PGI, VQPRD, etc.) of certain crops, except for those where production rules explicitly allow the use of GMOs. GM crops cannot be cultivated in homogenous areas of organic and integrated farming according to the regional laws or rules. The Regions and Autonomous Provinces can foresee a specific protection of the areas for the propagation and reproduction of plants, including the creation of closed areas where GM crops will be banned.</p>
LT	<p>(Draft revision of the Law on Protected Areas). Specific protected areas will be established where GM crops may not be grown.</p>
LU	<p>no specific procedures for different regions</p>
LV	<p>The cultivation of GM crops in protected nature territories of European significance (Natura 2000 places) is permitted only if specially protected biotopes, species and existence of specially protected habitats of species of limited use are not threatened. GM crop growers shall receive technical regulations in the regional office of the State Environmental Service.</p>
NL	<p>no specific procedures for different regions</p>
PL	<p>(Draft measures): There will be rules introduced on establishing GMO-free regions in Poland. Up to now all voivodeship announced themselves as GMO-free regions, but their declaration is not legally binding.</p>
PT	<p>No specific authorisation procedure is established at regional level or for specific regions. The general principle is: if a GM variety is authorised according to the EU legislation, it can be cultivated if the national coexistence rules are fulfilled. Although this principle exists, is possible to officially recognise a GMO-free zone for the cultivation of a particular plant species, following a voluntary decision made by a group of farmers.</p>
RO	<p>The regions where GM crops may not be grown are the natural protected areas (as Biosfera Delta Dunarii and others) and the Natura 2000 national reserves.</p>
SI	<p>The cultivation of GM crops is prohibited in regions established on a voluntary basis as described under point 1.4.2.</p>
SK	<p>no specific procedures for different regions</p>
SV	<p>no specific procedures for different regions</p>

1.4.2. Designation of regions or zones reserved for the cultivation of GM crops or, alternatively, for the cultivation of non-GM crops

AT	All declarations of the regions (Länder) within the network of GMO-free regions are of a political nature; there do not exist any legally binding provisions.
BE	Flanders: GMO-free zones can be declared only with the full written support and on a complete voluntary basis of all the farmers concerned. The GMO-free zones will have to have a minimum area (not yet determined) and can only be declared for plant species of which already GM varieties exist on the European market.
	Wallonia: There is the possibility to designate GMO-free zones for a given species on voluntary base of the farmers concerned. The procedure still has to be defined.
CY	No such regions or zones foreseen
CZ	No such regions or zones foreseen
DE	No such regions or zones foreseen
DK	No such regions or zones foreseen
EE	No such regions or zones foreseen
ES	There is the possibility to grow within certain zones exclusively GM or non-GM crops on a voluntary base by the all farmers concerned. There have already been agreements between GM crop growers and organic farmers to segregate both types of crop using either spatial or temporal segregation.
FI	Without formal restrictions, any grower can always enter into an agreement with another grower of not using any of the statutory (but not compulsory) production methods. However, such agreements do not bind any grower who has not signed the agreement. There is not yet any cultivation of GM varieties in Finland, and thus no practical experience of the use of such agreements.
FR	The natural parks can exclude the cultivation of GMOs, with the unanimous agreement of the concerned farmers, and if this possibility is included in their charter. There is not any experience yet.
HU	Zones for the cultivation of GM or non-GM crops have not been set up in the legislation yet. However, several farmers can jointly apply for the cultivation consent if they possess neighbouring fields. In that case the gene technological authority handles those fields as one entity and issues only one decision on the cultivation. Farmers can decide to designate areas for the cultivation of non-GM crops on the basis of voluntary civil law agreements.
IR	No such regions or zones foreseen
IT	(Draft measures) Areas for an exclusion of the cultivation of GM crops can be identified by regional legislation on the basis of the following criteria: the agro-environmental condition of the regional territory, specific measures for the protection of the environment, biodiversity, socio-economic aspects, and on the basis of technical criteria, if GMO admixture could not be prevented to

	<p>conventional, organic and integrated production on the basis of measures defined at farm level. Some restrictions can also be introduced in areas, where there is agricultural production under quality schemes, or permanent rearing of bees, or the production of seeds and other reproductive material. The guidelines foresee a system of legal recognition of the voluntary agreements with the ratification by the Municipal Authorities, when these agreements are directed to exclude the cultivation of GM crops and where it is possible to reach a quorum of 50 % + 1 of the farmers.</p>
LT	<p>(Draft measures) According to the draft of the Law on Protected Areas all protected areas in Lithuania should be without GMOs.</p>
LV	<p>Cultivation of GM crops may be prohibited in particular territories, in which, in accordance with scientific evidence, the cultivation of GM crops may cause substantial losses to the economy and hinder its development, cause harm to human and animal health or to the environment. The European Commission shall be informed regarding such prohibition. Local governments, associations and foundations may submit to the Ministry of Agriculture recommendations for declaration of a particular territory as free from the cultivation of GM crops if, in accordance with scientific evidence, the cultivation of GM crops may cause substantial losses to the economy or hinder its development, cause harm to human and animal health or to the environment. Local governments, associations and foundations may submit to the Ministry of Agriculture recommendations for declaration of a particular territory as free from the cultivation of GM crops if, in accordance with scientific substantiation, the cultivation of GM crops may cause substantial losses to the economy or hinder its development, cause harm to human and animal health or to the environment. Natural protected zones have been defined as potential future GMO-free zones, if there is evidence that growing of GM crops could, despite of coexistence measures, have a negative impact on the biodiversity of the natural protected zones.</p>
NL	<p>No such regions or zones foreseen</p>
PL	<p>No such regions or zones foreseen</p>
PT	<p>GMO-free zones: In accordance with the national legislation, the initiative to request the establishment of a GMO-free zone can result from the direct initiative of the interested farmers or of the townships, which can, by means of their Municipality Assembly, deliberate on the request for a GMO-free zone from the cultivation of a certain plant species. This possibility granted to the municipalities does not exempt them from having to, first, consult with their respective farmers associations and obtaining their favorable opinion, as it is the right of the individual farmer or owner of agricultural endeavor of not having his or her agricultural production included in a GMO-free zone. As a result of this legal possibility and as the legal requisites have been met, the Municipality of Lagos was officially recognized as a GMO-free zone from the cultivation of GM varieties of maize.</p> <p>GMO production zones: During 2007, 11 GMO production zones were registered with the Ministry of Agriculture, spread throughout the regions North, Center, Lisbon &amp; Tejo Valley, and Alentejo, which, altogether, represent 43,5 % of the</p>

	area planted with GM maize. In 2008, important increases in the number of GMO production zones have been noted, in particular in the centre and north of the country where the land parcels are very small.
RO	No such regions or zones foreseen
SI	(Draft measures) The Act allows heads of agricultural holdings to establish, on a voluntary basis (i.e. by written agreement), an area in which GM crops will not be cultivated. The valid period for such an agreement may not exceed 5 years. The Ministry will take a written agreement signed in accordance with the Act into account when making a decision on whether to grant an authorisation to cultivate GM crops. In these regions the cultivation of GM crops is then not possible. The establishment of GM crop production zones is also provided in the Act. Municipal councils are taking decisions setting up GMO-free Municipalities. In these decisions the cultivation of GMO crops is prohibited only on the land, which is the property of the Municipal.
SK	No such regions or zones foreseen
SV	Farmers in an area have the possibility to come to an agreement on the method of cultivation. That would then be on a voluntary basis and is not a regulative issue.

#### 1.4.3. Provisions concerning the possibility that coexistence may not be possible in certain regions due to difficult farming conditions

BE	Flanders: No specific provisions have been set in the decree (framework legislation). Species specific measures will be adopted for maize instantly and as new species with GM varieties will come on the European market. It will then be discussed whether for the concerned plant species, coexistence will be possible, taking account of the small and fragmented fields in Flanders. Wallonia: None
CY	In Cyprus the majority of parcels are small and fragmented and this is considered a major difficulty in GM crop cultivations. No specific provisions are in place for this.
CZ	None
DE	None
DK	None
EE	None
ES	None
FI	None

FR	None
HU	None
IR	None
IT	(Draft measures) The guidelines foresee the definition of areas for an exclusion of GM crop cultivation on the basis of the environmental and socio-economic characteristics and on the basis of the voluntary agreements.
LT	None
LU	Yes
LV	None
NL	None
PL	Not yet decided
PT	None
RO	None
SI	None
SK	None
SV	None

#### 1.4.4. Measures concerning the cultivation of GM crops in the framework of the national or regional Rural Development Programmes

BE	Flanders and Wallonia: None
CY	None
CZ	None
DE	None
DK	None
EE	None
ES	None
FI	None
FR	None

HU	None
IR	None
IT	None
LT	None
LU	None
LV	None
NL	None
PL	None
PT	Farmers participating in the support scheme for integrated production under the national Rural Development Programme are not allowed to use GM crops. However, GM crops are not generally prohibited in integrated production.
RO	None
SI	The issue of the coexistence of GM crop has been addressed in the Action Plan for the Development of Organic Farming in Slovenia to 2015 and in the Resolution on the National Environmental Protection Programme 2005-2012.
SK	None
SV	None

#### 1.4.5. Legislative restrictions for the cultivation of GM crops

AT	Cultivation of MON810 is impossible due to a prohibition established at federal level.
BE	Flanders and Wallonia: None
CY	GM crops may not be grown in Natura 2000 and SPA areas. Also, no GM crop cultivation can take place when the GMO has relative species as endemic or native in Cyprus.
CZ	None
DE	None
DK	None
EE	None

ES	None
FI	None
FR	The cultivation of maize MON810 is forbidden on all the French territory, until a decision is taken concerning the renewal of the authorisation of the maize MON810.
HU	Hungary applies a temporary prohibition on the cultivation of MON810 varieties since 2005 based on the safeguard clause of Directive 2001/18/EC on the deliberate release of GMOs.
IR	None
IT	(Draft measures) The cultivation of GM crops is subject to a Ministerial Authorisation. Some Regions have prohibited the cultivation of GM crops on their territory for different periods, which will be removed after the approval of regional provisions of coexistence, on the basis of the inter-regional guidelines. The guidelines foresee the prohibition of cultivation of the GM rapeseed on the whole national territory.
LT	None
LU	None
LV	The cultivation of GM crops in the protected nature territories of European significance (Natura 2000 places) is permitted only if specially protected biotopes, species and existence of specially protected habitats of species of limited use are not threatened.
NL	None
PL	None
PT	None
RO	It is forbidden to plant GM crops on compact plots smaller than 2 hectares, except for those set up for scientific purposes.
SI	None
SK	None
SV	None

#### 1.4.6. Agreement of third parties to the cultivation of GM crops

AT	In most regions (Länder), no agreement by third parties is required. In one region, neighbours and GM crop growers are parties to the consulted by the
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	competent authority in order to grant an authorisation for the cultivation of GM crops.
BE	<p>Flanders: Within the isolation distance, neighbouring farmers (no hobbyists or other citizens) can register objections (appeals) to the cultivation of the GM crop, based on their own reasoned economic interest. Owners do not have any involvement in the agreement; they will only be formally informed. Other third parties are not involved.</p> <p>Wallonia: None, except if the isolation distance is totally or partially occupied by the neighbouring farmer. In this case this neighbouring farmer can prevent the establishment of a GM crop, if he intends to grow within the isolation distance a crop compatible with the GM crop and that he intends to harvest as conventional or organic.</p>
CY	None
CZ	None
DE	None
DK	None
EE	None
ES	None
FI	None
FR	None
HU	Yes, if the isolation distance extends over the neighbouring field(s).
IR	(Draft measures) Only where part of the isolation distance is within the ownership of the third party.
IT	(Draft measures) An agreement is required among third parties in areas, where the cultivation of GM crops is otherwise excluded.
LT	A consent of the land owner is required
LU	A consent of the land owner is required
LV	Yes, cultivation is dependent on the agreement of third parties (land owners, neighbours).
NL	None
PL	Not yet decided
PT	None

RO	None
SI	Yes, if the producer can not assure all necessary measures for coexistence by himself.
SK	An agreement of neighbour field owner or user is not necessary. The isolation distance shall be observed by GM crop growers, not by their neighbours.
SV	None

### 1.5. Administrative provisions

#### 1.5.1. Enforcement and monitoring of the provisions by public authorities

AT	In lack of experience details regarding the enforcement and monitoring cannot be provided. The regions (Länder) have to take the initiative in the case of applications. They have their own regional authorities (according to the national Constitution) being in charge for such matters.
BE	Flanders: Supervision is provided by officials from the public authority. Within the framework of their duties they may, in particular: (1) question people about facts that are relevant for carrying out supervision; (2) access all books and documents that are required for completing their task; (3) take samples of crops with a view to analysing them; (4) take samples or have samples taken other than those referred to in point 3 with a view to dissecting them; (5) freely walk the land; (6) take the necessary preservation measures. The officials are authorised, in the event of an infringement, to draw up an assessment report. They shall submit this report immediately to the competent authority. As far as is known, the suspected offender shall be notified with a copy of the assessment report. They may give verbal or written suggestions, warnings and orders and take samples and have them dissected by an approved laboratory.
CY	Not yet relevant due to lack of GM crop cultivation
CZ	The Ministry of Agriculture (with a support of regional agricultural agencies and the State Phytosanitary Authority) checks on all notified fields with Bt maize whether farmers observe the isolation distances (and/or buffer zones). On chosen fields samples are taken and than analyzed in a competent laboratory.
DE	Compliance with coexistence measures is monitored by the relevant authorities of the German regions (Länder). The results are discussed at regular meetings of the German competent authorities.
DK	During the first years of GM crop cultivation it is the intention to control all farms cultivating GM crops for their observance of the coexistence rules. In time with an increasing number of farms cultivating GM crops this 100 % control will be replaced with spot checks. The control will be performed by authorised field inspectors from the Danish Plant Directorate.

EE	The Plant Production Inspectorate takes samples.
ES	(Draft measures) Operators growing GM crops, following a request, have to collaborate with the competent authorities in taking samples and gathering the information needed to comply with the monitoring plans of those varieties. Regional competent authorities will inspect a percentage of GM crop fields in order to check whether co-existence rules have been applied during the cultivation, harvest, transport and storage. The Ministry of the Environment and Rural and Marine Affairs will elaborate an annual report on the monitoring and evaluation work carried out by the regional governments. This report will include, amongst others, problems that may have been experienced by neighbouring farmers, as well as data concerning the adventitious presence of GMOs in non-GM fields and observations on the compliance with the legislation. The first report will devote special attention to the potential economic effects of co-existence, analysing available compensation schemes. The National Commission on Bio-vigilance must be notified by the regions about relevant information on coexistence.
FI	The general guidance and control of the enforcement of the draft law belongs to the Ministry of Agriculture and Forestry. The Finnish Food Safety Authority Evira is responsible for the enforcement of the draft law and for the control of complying the measures imposed in it on GM agriculture. Evira can also utilize certain regional authorities to help it with its control activities. It also makes decisions on the applications for compensation.
FR	There is not yet any experience concerning the application of the new law.
HU	<p>Authorization process: the competent authority (cultivation authority) for the authorisation procedure is the Ministry of Agriculture and Rural Development. The Ministry of Environment and Water issues an expert opinion regarding the size of the isolation distance and special cultivation instructions in case of proximity of areas under environmental protection, environmental sensitive areas or Natura 2000 areas, if necessary.</p> <p>Central database on GM crop fields: operation of the national database is the duty of the cultivation authority.</p> <p>Regular controls: respecting the provisions contained in the cultivation consent and in legal regulations shall be supervised by the regional organs of the Central Agricultural Office.</p> <p>There are specific provisions dealing with the costs associated with sampling and testing of GMO presence in other products in ministerial decrees. The offender should pay the costs of the official control in the case of justified fault. Authorities carry out sampling without recompense. In procedures upon application, charges must be paid by the applicant. Charges of state administrative procedures and administrative services with variable costs have to be determined in a lump sum. The table of charges (and also the rules of collecting, managing, recording and refunding charges) must be specified in a decree of the competent minister, issued with the agreement of the Minister of Finance. The extent of charges to be paid must cover all costs connected with the</p>

	procedure or service.
IR	(Draft measures) All monitoring and enforcement will be carried out by the DAFF
LT	(Draft measures): The GM crop grower must submit all necessary data to the regional inspection post of the State Plant Protection Service 20 days prior to sowing of GM crops. During 30 days period after sowing of GM crops, the inspector carries out an inspection in the field. In the case of non-conformity, the farmer is obliged to take all necessary measures to eliminate the crop.
LU	There is an administrative control of the notification of the GM crop grower, followed by a field control in order to check if the segregation requirements have been fulfilled.
LV	State supervision and control of the compliance with these Regulations in conformity with their competence shall be ensured by: (1) the State Plant Protection Service, which performs the control of GM crops during the cultivation of GM crops, shall supervise and control the seed circulation of the varieties of GM crops; (2) the Food and Veterinary Service, which performs the control of storage, preparation, packaging and transporting of GM ready products (except for seeds); and (3) the State Environmental Service, which controls the observance of isolation distance from the areas of cultivation of GM crops to the protected territories of European significance (Natura 2000 areas).
PL	Enforcement and monitoring is in the duties of public authorities (Ministry of Environment, Ministry of Agriculture and control bodies). The proper application of legal provisions is controlled by occasional inspections. In particular, controls are performed on seed material. There will be controls on places of GM crop cultivation and in GMO-free regions.
PT	It is the duty of the regional agricultural services inspectors to perform activities of control and inspection of the cultivation of GM varieties. These activities are coordinated and supported technically by DGADR. Inspection activities are aimed to evaluate the compliance with the Country's administrative and technical regulations pertaining to the cultivation of GM varieties. The control and inspection activities concur with all aspects of the law, both administrative and technical, and follow a harmonized programme applied by all Inspectors. Generally, each farmer selected to be inspected receives at least two visits of the Inspector, one of them during the development of the culture, and the other in the final phase and/or after the harvest. During such visits the following aspects are checked, namely: (a) confirmation of registered areas and varieties; (b) verification of labels on the seed packaging and respective invoices; (c) proof of participation of the farmer or the agricultural association's representative in the training; (d) identification of the 'neighbours' and verification of the respective information; (e) verification, in the field, of the application of technical regulations for the minimization of accidental presence by pollen; (f) verification, in the field, of sowing the refuge zones; (g) evaluation of compliance with the technical regulations for the minimization of accidental presence by mechanical mixtures; and (h) evaluation of compliance with the

	labelling and traceability regulations.
RO	The Ministry of Agriculture has its own control plan which includes controls on all GM crop growers. There is also a Protocol signed in 2006 by the authorities involved in the GM production chain (National Sanitary Veterinary and Food Safety Authority, Ministry of Agriculture and Rural Development, National Environmental Guard National, Consumer Protection Authority), which defines the responsibilities of each authority relative to the effective enforcement of the domestic biotech legislation (as derived from the acquis).
SI	(Draft measures) The register of GM crop producers is managed by the Ministry of Agriculture, Food and Forestry. The Inspectorate for Agriculture, Forestry and Food of the Republic of Slovenia is responsible for supervising.
SK	UKSUP keeps a register of GM crop growers and GM crop production areas and controls compliance with the coexistence law. Controls are done on the farms at the time of sowing, concerning the observation of isolation distances, the handling of GM seed and production. One years of cultivation, responsible staff inspects GM crop fields takes samples from neighbouring fields.
SV	The SBA is the responsible authority for control of compliance of the legislation. There will be both administrative and in-field controls.

#### 1.5.2. Penalty rates for non-compliance of the coexistence rules

AT	In most regions (Länder), penalties apply for the cultivation of GM crops without approval by the competent authority, for non-compliance with conditions for the cultivation consent, for the hindrance of public authorities in measures related to controls and the prevention of damage resulting from GM crop illegal cultivation. Upper limits of penalties range from € 2.000 to € 4.000 (and in cases of recurrence € 8.000) to € 15.000 to € 30.000, depending on the type of non-compliance, and the region concerned.
BE	Flanders: Dependent on the infraction (both administrative and/or related to the cultivation itself) administrative fines are foreseen between € 200 and € 1000, possibly augmented with costs for expertise, etc. There are no other penalties.  Wallonia: Penalties and/or imprisonment are applicable according to different categories of infractions to the decree.
CY	When a deliberate release into the environment of GMOs occurs and causes damage into the environment, public health, or private property the operator can be charged with an offence. The penalty could be up to 5 years in prison and / or € 300.000. The court can also order the submission of all expenses for damage restoration.
CZ	The Ministry of Agriculture can impose a penalty up to the amount of 500.000 CZK (ca € 21.000) on a GM crop grower who shall not meet obligations laid down in coexistence rules.

DE	If the GM crop grower does not comply with the provisions of the order on good farming practice in the cultivation of GM plants the most relevant consequences will be in the field of liability. Furthermore, those farmers may be punished according to the German administrative law.
DK	Infringements of the coexistence rules will be punished with fines. In the absence of experience with cultivation of GM crops the possible size of fines still has to be determined. An approval for cultivation of GM crops may also be withdrawn judicially, if a farmer has dispersed GM material or has given rise to the risk thereof as a result of gross or repeated violation of the provisions of the act or the executive order.
EE	Following a first warning, penalties may be imposed in cases of non-compliance. Finally, an operator may be deleted from the register of GM crop handlers.
FI	(Draft measures) If the GM crop grower does not comply with the draft law or decrees based on it, the control authority may order him to fulfil the obligations within a prescribed time. For preventing GMO admixture the Finnish Food Safety Authority Evira may also deny GM plant production in a certain area for a certain time period, if plant production in the said area does not fulfil the requirements stated in the draft law or the person responsible for cultivation has not passed the required examination. For similar reasons, Evira may also deny handling, storing or transporting of GM plant materials in a certain area. The ground for the denial is that the grower does not act in accordance with the above order, and that severe economic losses may result. A conditional fine may also be prescribed to strengthen the order. A grower who on purpose or due to gross negligence infringes certain central requirements imposed on him in this draft law shall be imposed a fine on coexistence delict, unless a more strict penalty applies on the basis of other legislation.
FR	The sanctions for infringements of the coexistence rules are up to 2 years prison, and € 75.000.
HU	Penalties can range from 300.000 HUF to 1 million HUF. However, in repeated cases it ranges from 1 to 10 million HUF.
IR	Not yet specified
IT	(Draft measures) The sanctions foreseen are of an administrative nature and cover all obligations on the GM crop grower. The sanctions go from a minimum of € 500 to a maximum of € 60.000. In the case of repetition it is foreseen to withdraw the licence for growing GM crops.
LT	The Code on Administrative Right's Violation is applied to all persons who evade the requirements set out in EU and national law, and who are connected with import, transit and export of GMOs, the deliberate release into the environment, and the placing on the market. The value of penalties depends on the gravity and times of infringement: for first infringement cases: from 1.000 to 2.000 Litas, and in repeated cases: from 2.000 Litas to 5.000 Litas.

LU	Penalties can go up from 8 days to six months of prison and/or from € 251 up to € 750.000.
LV	For infringement of the requirements for coexistence of GM crops, penalty rates are: for individual persons from LVL 50 to LVL 500 and for legal persons from LVL 500 to LVL 3000.
NL	Infringements result in disciplinary action. On the basis of court trial reports of the supervisors appointed by the committee, the chairman will bring cases before the disciplinary tribunal. The judicial process of the disciplinary enforcement procedure is provided for in the Act on disciplinary jurisdiction within the industrial organisation 2004 which entered into effect on 1 April 2004. The disciplinary measures that can be taken in the event of an infringement of the regulation include: (a) reprimands; (b) financial penalties up to € 4.500 maximum; (c) publication of the ruling at the expense of the party involved; (d) putting stricter monitoring in place on the farm of the party involved at the latter's expense for two years maximum. If the value of the goods involved in the infringement, or the value of the unauthorised benefit that has been derived, either wholly or in part, from the infringement exceeds € 1.135, a financial penalty can be imposed in the sum of maximum € 11.250.
PL	Not yet decided
PT	Non-compliance with the coexistence provisions constitutes an offence punishable by a fine whose minimum and maximum amounts will be € 250 and € 3.700, respectively, or € 2.500 and € 44.800 respectively, depending on whether the offender is an individual or legal entity. Depending on the gravity of the offence and level of blame of the offender, the following accessory penalties may be applied together with the fines: (a) loss of objects belonging to the offender; (b) ban on practising professions or activities which depend on authorisation from the public authorities; (c) loss of the right to subsidies or benefits granted by public services or bodies; (c) closure of the establishment whose operation is subject to authorisation by the administrative authorities; (d) suspension of authorisations licences and permits.
RO	The legislation does not provide for penalties for non-compliance with the coexistence rules in force.
SI	(Draft measures) Legal persons shall be fined between € 1.000 and € 125.000 for an offence if they (a) cultivate GM crops without a decision authorising the cultivation of GM crops; (b) fail to report the data change, manage in the GM crop register in requisite deadline; (c) the production of GM crop is not in the accordance with the application, on the basis of which the person was registered in the Register of GM crop producers; (d) fail to take measures mentioned in the application for growing GM crop, on the basis of which the legal person was registered in the Register of GM crop producers; (e) the undertakings of GM crop producers from the Article 9 paragraph, 2,3,4,5,6, of the Act are not fulfilled; (f) GM crop and non-GM crops, subject to an agreement on the area for cultivation of GM crops with the annual plan are not produced; (g) fail to take measures on the area for growing GM crops (h) the undertakings specified in the

	written agreement on the cultivation of GM crops in a specific area are not fulfilled by the signatory of the agreement; (i) the data about persons who pass the examination or resuming training and about the delivery of a certificate or extension of a certificate of professional competence respectively are not communicated to the Ministry.
SK	Penalties for non-compliance with the coexistence law range from 10.000 to 1.000.000 SKK.
SV	Any infringement would be dealt with within the justice system. There are no pre-decided penalty rates.

## 2. Monitoring programmes of the co-existence legislation

### 2.1. *Monitoring programmes established following the adoption of the legislation, and their outcome*

AT	As there has been no cultivation of GM crops the monitoring programme is reduced to the production and marketing of certified seed in Austria. It includes post control tests and random tests in order to prevent adventitious presence of GMOs in conventional seed and organic seed.
BE	Not yet applicable
CY	Not yet applicable
CZ	A monitoring programme applies for the cultivation of Bt maize. Since 2006, the Ministry of Agriculture (with a support of regional agricultural agencies and the State Phytosanitary Authority) has checked on all of the notified fields with Bt maize whether farmers observe the mandatory isolation distances (and/or buffer zones). On chosen fields samples were taken and than analyzed in a competent laboratory. The outcome of the controls: Most farmers grow Bt maize on locations where no conventional or organic maize is cultivated. In other cases, farmers use buffer zones to minimise gene-flow.
DE	The cultivation programmes are monitored by the German Länder. The results are discussed at regular meetings of the German competent authorities. No further recurrent evaluation is foreseen.
DK	In the agreement with the political parties who adopted the law it was decided that the co-existence model should be evaluated two years after coming into force of the law (2005). The evaluation took place in 2007. Both the original scientific working group and the original group of stake holders participated in the work. This process resulted in an update of the co-existence report of 2003 with the title: "Supplementary Report from the Danish working Group on the Co-existence of Genetically Modified Crops with Conventional and Organic Crops" from August 2007. Since there has not yet been any commercial cultivation of

	GM crops in Denmark (In 2005 GM maize was cultivated on 1.1 ha as a part of a research project) the evaluation was mostly based on scientific data and experience with GM cultivation in other EU-countries. The outcome of the evaluation was a reduction of the cultivation distances for the crops included in the legislation (maize, beet and potatoes) and, consequently, also a reduction of the compensation distances.
ES	There is a monitoring plan covering the cultivation of GM maize varieties containing MON810. This plan was approved by the former Ministry of Agriculture after a report by the National Biosafety Committee. This plan includes the following aspects: The minimum duration of the plan is 5 years. The plan should provide the Ministry of Environment and Rural and Maritime Affairs, the National Biosafety Committee and the Autonomous Regions with all information concerning the distribution and sale of GM maize seeds. This information has to be provided at the end of each agricultural season. The monitoring plan also covers environmental effects linked to Bt maize cultivation (insufficient efficiency of the insecticidal effect; monitoring of resistance of populations of corn borers to the Bt protein; effects on non-target populations).
ET	Not yet applicable, however, a biosafety monitoring has been established covering oilseed rape.
FI	Not yet applicable
FR	Considering the recent adoption of the law, no monitoring programme has been established yet. However, farmers who produced GM crops in 2007 undertook to apply co-existence measures on a voluntary basis (50 m or 24 rows of non GM maize). A monitoring has been carried out by the Ministry of Agriculture to assess the application of these measures and their efficiency. The study included 148 fields in Midi-Pyrénées and 83 fields in Aquitaine. Samples were taken from 15 fields in Midi-Pyrénées and 4 fields in Aquitaine, and were analysed. The GMO content was below 0.9 % in most of the samples analysed. Two samples were above 0.9 %. One of them corresponded to a field where the isolation measures recommended were not applied. The monitoring protocol has to be improved to take into account more parameters such as the cleaning of the seeder. The results are available on:  <a href="http://www.ogm.gouv.fr/savoir_plus/fiches/pdf/BILAN20072.pdf">http://www.ogm.gouv.fr/savoir_plus/fiches/pdf/BILAN20072.pdf</a>
HU	Not yet applicable
IR	Not yet applicable
IT	The guidelines foresee an ex-post monitoring of at least three years, which considers the risk of possible contamination from gene flow, as well as environmental aspects (impact of GM crop cultivation on the soil, possible water contamination, impact on animal and plant biodiversity), and possible contamination of food and feed and of the overall agri-system.
LT	Not yet applicable. Generally, the State Plant Protection Service is responsible for the control of GM crops (other than seed crops). A draft Order on monitoring

	provisions is being prepared.
LU	Not yet applicable
LV	Not yet applicable. Generally, the State Plant Protection Service controls the cultivation of GM crops and the circulation of seeds of GM varieties. The Food and Veterinary Service controls the storage, preparation, packaging and transporting of GM final products. The State Environmental Service controls compliance with isolation distances to protected territories of European significance (Natura 2000 places). The State Plant Protection Service is responsible for the testing of seed lots. Until now GMO admixture to non-GM seeds has not been observed.
NL	Not yet applicable
PL	Not yet applicable
PT	An annual monitoring programme is conducted by DGADR in collaboration with the regional agricultural services, including control and inspection activities. This programme allows a general evaluation of the level of compliance with the co-existence legislation and the occurrence of eventual problems, either with the trading of products or with third parties not involved in the production of GM crops. The plan includes questionnaires distributed to GM maize growers and the sampling of conventional maize fields in their neighbourhood, in order to evaluate, through laboratory analysis, the adventitious presence of MON810. An official monitoring report is published annually since 2005. Reports are available at: <a href="http://www.dgadr.pt">www.dgadr.pt</a> . The results of the sampling done on the conventional maize fields neighbouring the GM maize fields have shown in 2007 that 38 % of the samples did not show any presence of MON810, and, overall, the presence of this event was quantified to be below 0.9 %. No major problems have been found, neither with the implementation of the national rules or with the neighbours cultivating conventional maize.
RO	The inspection and control programmes established by the Directorate of Technical Inspection and Control of the Ministry of Agriculture, included in 2007 comprehensive inspections at GM maize growers in order to check compliance with the legislation. The following aspects were verified: (a) the seed origin; (b) the distances between GM maize and conventional/organic maize; (c) the phasing of the sowing time; (d) separate storage of production; (e) handling and delivery of the production. The outcome of these inspections proved that all GM maize growers were compliant with the legislation in force. Since 2008, the Inspection and Control Programmes also conducts analyses in order to establish the level of GMO admixture of conventional production.
SK	UKSUP, the Department of Seeds and Planting Materials controls GM seed use and GM crop cultivation as regards the sowing, harvest, storage, which also includes the sampling of neighbouring fields. UKSUP, the Department of Molecular Biology NRL performs the detection and quantification of GMOs in field samples of conventional and/or organic production adjacent to GM crop fields.

SL	Not yet applicable. (Draft measures) The monitoring of unintentional presence of authorised GMOs in non-GM crops is foreseen based on results of random sampling and testing of plants and their products, with special attention to areas where production of GM crops was notified.
SV	Not yet applicable

2.2. *Indication regarding the appropriateness or inappropriateness of the co-existence rules in place*

AT	Not yet applicable
BE	Not yet applicable
CY	Not yet applicable
CZ	To date, court cases due to GMO admixture have not been noted. There was one claim by an affected operator: an organic maize producer decided not to grow organic maize in a distance of 2 kilometres from a field of Bt maize.
DE	No negative experience or court cases so far, apart from one court case regarding bee keeping. The court criticised that special provisions for coexisting measures for bee keeping have not been included in the legislation.
DK	The involved group of stake holders, which included farmers and consumers organisations, agreed on the outcome of the evaluation.
ES	See point 4.2
ET	Not yet applicable
FI	Not yet applicable
FR	The analyses realised in 2007 showed that the measures recommended (50 m or 24 rows of non GM maize) are appropriate regarding the labelling threshold of 0.9 %.
HU	Not yet applicable
IR	Not yet applicable
IT	Not yet applicable
LT	Not yet applicable
LU	Not yet applicable
LV	Not yet applicable

NL	See point 6.1. Research results indicate that the isolation distances chosen are appropriate.
PL	Not yet applicable
PT	<p>In 2007, 62 questionnaires were given to farmers who cultivated GM maize, and the most relevant conclusions from the answers received are: (1) 76% of the participating farmers planted GM maize for the first time in 2007 and the main reason for their decision to sow this type of variety was the need to control the corn borers attacks. (2) 90% of the participating farmers mentioned having problems controlling the corn borers attacks, stressing that there is a maximum of 3 generations of this plague per cultivation cycle and an average of 1.7 generations per cultivation cycle. This situation had required the farmers to use pesticide treatment, averaging 1.6 treatments per cultivation cycle and a maximum of 5 treatments per cultivation cycle. (3) In terms of training received, 95% of the farmers said it was sufficient; 98% considered the information contained in the seed packaging was clarifying in regards to OGM, while 73% considered the information clarifying in regards to the co-existence regulation, and 69% were clarified in regards to the traceability and labeling rules. (4) Only 8% of the farmers considered that, in general, the national regulation on co-existence is difficult to follow, stressing the information to neighbors as one of the most difficult aspects to perform. (5) All of the participating farmers showed understanding about the reason for the implementation of the refuge zones. (6) Most of the production obtained (61%) was intended to be placed on the market, while 25% of the production was used in the farm itself. In 14% of the cases, the production was partially sold and partially used in the farm. Regarding the agricultural balance derived from the use of GM varieties, the results were the following: (1) Ease of cultivation: 37% - Better; 50% - Same; 13% - Worse. (2) Pesticide application: 7% - Same or more; 86% - Less. (3) Production: 69% - Higher; 26% - Same; 5% - Lower, with reasons not directly related to the varieties (soil drenching, late sowings). (4) Quality of product obtained: 86% - Better; 12% - Same; 0% - Worse. As regards the economic balance derived from the use of GM varieties, the most important aspects were, on the negative side, a higher cost of seed of these varieties and, on the positive side, a smaller number of pesticide treatments, an increase in production and a higher quality of the products obtained. 75% of the participating farmers indicated to continue the cultivation of GM maize, 1.6% do not and 23.4% were not yet decided.</p> <p>No court cases had been registered due to GMO admixture to non-GM production. One court case is still on going related to a non GM- activist group destruction action against a GM maize field.</p>
RO	In 2007, no claims of economic operators, or court cases due to GMO admixture to non-GM production were registered.
SL	Not yet applicable
SV	Not yet applicable

### 3. List of national co-existence legislation in force

Member State	Title and reference of legislation
AT	<p>Salzburger Gentechnik-Vorsorgegesetz, LGBl. Nr. 75, dated 10.9.2004</p> <p>Kärntner Gentechnik-Vorsorgegesetz, LGBl. Nr. 5, dated 28.1.2005</p> <p>Burgenländisches Gentechnik-Vorsorgegesetz, LGBl. Nr. 64, dated 29.07.2005</p> <p>Tyroler Gentechnik-Vorsorgegesetz, LGBl. Nr. 36, dated 9.3.2005</p> <p>Niederösterreichisches Gentechnikvorsorgegesetz, LGBl. Nr. 81, dated 31.8.2005</p> <p>Wiener Gentechnik-Vorsorgegesetz, LGBl. Nr. 53, dated 21.9.2005</p> <p>Oberösterreichisches Gentechnik-Vorsorgegesetz, LGBl. Nr. 79/2006, dated 6.7.2006</p> <p>Steiermärkisches Gentechnik-Vorsorgegesetz, LGBl. Nr. 97/2006, dated 11.8.2006</p> <p>In Vorarlberg the Gesetz über Naturschutz und Landschaftsentwicklung, LGBl. Nr. 22/1997, deals with the cultivation of GMO.</p>
BE	<p>Décret du 19 juin 2008 relatif à la coexistence des cultures génétiquement modifiées avec les cultures conventionnelles et les cultures biologiques. Moniteur belge du 08/08/2008.</p>
CZ	<p>Act No. 441/2005 Coll. on Agriculture (amended Act No. 252/1997 Coll. on Agriculture)</p> <p>Decree on more detailed requirements for cultivation of GM variety</p>
DE	<p>Verordnung über die gute fachliche Praxis bei der Erzeugung gentechnisch veränderter Pflanzen (Gentechnik-Pflanzenerzeugungsverordnung (Gentechnik-Pflanzenerzeugungsverordnung vom 7. April 2008 (BGBl. I S. 655))</p>
DK	<p>Act on Growing etc. of GM Crops</p> <p>Executive Order on the Growing etc. of GM Crops.</p> <p>Executive Order on Compensation for Losses due to Certain Occurrences of GM Material.</p> <p>Executive Order on the Growing etc. of GM Crops References.</p> <p>Executive Order on Compensation for Losses due to Certain Occurrences of</p>

	GM Material.
FR	Law 2008-595 published in the French Official Journal on 26.08.2008
HU	<p>Act Nr. CVII. of 2006 on the amendment of the Act Nr. XXVII. of 1998 on gene technological activity. Official Journal of Hungary Nr. 2006/150 (XII. 7.)</p> <p>Regulation of the Ministry of Agriculture and Rural Development Nr. 86/2006. (XII. 23.) on the coexistence of GM, conventional and ecological crops. Official Journal of Hungary Nr. 2006/161(XII. 23.)</p>
IT	<p>Law No 5, of 28/01/2005, conversion in law with modifications of the law by decree No 279 of 22 November 2004, providing urgent indications to ensure the coexistence among the transgenic and conventional or organic agriculture, published in the Official Journal No 22 of 28/1/2005.</p> <p>The legislative competence in the matter of coexistence rules is regional, as established by the Constitutional Court with judgement No 116 delivered on 17th March 2006, which on the basis of this opinion has repelled most of the law No 5/2005.</p>
LT	<p>Order of Minister of Agriculture No 3D-1 Concerning Approval of the Rules on GM Plants Intended to Be Grown in Lithuania Declaring and Information Providing. Official Journal „Valstybės žinios“ No 5-236 (2007).</p> <p>Order of Minister of Agriculture and Minister of Environment No 3D-504/D1-608 Concerning Approval of the Rules on Coexistence of GM Crops with Conventional and Organic Crops. Official Journal „Valstybės žinios“ No 121-4978 (2007).</p> <p>Order of the Head of State Seed and Grain Service under the Ministry of Agriculture No 1A-235 Concerning the Rules on the Inspection of the GM agricultural plants seed crops, nurseries of propagating materials of horticultural and ornamental plants. Annex of the Official Journal „Valstybės žinios“ No 3-48 (2005).</p>
LU	<p>Loi du 18 mars 2008 sur la commercialisation des semences et plants ainsi que sur la coexistence des cultures génétiquement modifiées, conventionnelles et biologiques. Journal Officiel du Grand-Duché de Luxembourg, 27 mars 2008, p. 446.</p> <p>Règlement grand-ducal du 22 juillet 2008 fixant les distances d'isolement et les conditions techniques à respecter lors de la mise en culture de semences et plants génétiquement modifiés. Journal Officiel du Grand-Duché de Luxembourg, 20 août 2008, p.1824</p>
LV	Regulation No. 30, Adopted 15 January 2008, Regulation regarding the Requirements for Coexistence of GM Crops, as well as the Procedures for Supervision and Control. Ziņotājs No.4, 28.02.2008.
NL	HPA Regulation on the coexistence of crops of the Commodity Board for

	Arable Farming. JBA. No 322.
PT	<p>Decree-law 160/2006, of 21 September, on national measures on coexistence of GM crops with conventional and organic farming published in official journal.</p> <p>Order n. ° 904/2006, of 3 December, for the establishment of free zones of GM crop cultivation</p> <p>Order n.°1611/2007, of 20 December</p> <p>Decree-Law 387/2007, of 28 November, which creates a compensation fund to cover any economic damage, caused by adventitious presence of GMO on non GM crops if the labelling threshold (0.9 %) is exceeded.</p>
RO	<p>Order no. 237 of 7 April 2006 on authorising economic agents to grow GM crops, issued by the Minister of Agriculture and Rural Development. Official Journal of Romania, Part I, no. 337 from 14 April 2006</p> <p>Order no 471 from 14 July 2006. Official Journal of Romania, Part I, no. 663 from 2 August 2006.</p>
SK	<p>Act No. 184/2006 of 16. Marc 2006 on the cultivation of genetically modified crops in agricultural production. Zbierka zákonov (National Journal), 68, xx. 7.2007 p.1118 -1121</p> <p>Decree No. 69/2007 of 14 August 2006, Slovak Republic Ministry of Agriculture implementing Act No. 184/2006 Coll. on the cultivation of genetically modified crops in agricultural production, witch was notified according to article 1 Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations. Zbierka zákonov (National Journal), 43, xx. 7.2007 p. 494 -495</p>
SV	<p>Ordinance on precautionary measures for the cultivation and transport etc., of GM crops (SFS 2007:273). Issued on 10th of May 2007</p> <p>Administrative provision of the Swedish Board of Agriculture on precautionary measures for the cultivation of GM crops (SJVFS 2008:34) Issued on 26th of June 2008.</p>

#### 4. Commercial experience with GM maize cultivation

##### 4.1. Surface of GM maize cultivation and development over time

AT	No cultivation yet
BE	Flanders: No cultivation yet
	Wallonia: No cultivation yet

CY	No cultivation yet
CZ	Commercial cultivation started in 2005. Acreage: 2005: 270 ha; 2006: 1.290 ha; 2007: 5.000 ha, 2008: 8.400 ha (the acreage for 2008 still to be refined).
DE	Commercial cultivation started in 2005. Acreage: 2005: 340 ha; 2006: 946 ha; 2007: 2.685 ha; 2008: 3.371 ha.
DK	Apart from 1.1 ha with GM maize in 2005 - cultivated as part of the EU research project ECOGEN - there is no commercial cultivation of GM maize in Denmark yet.
EE	No cultivation yet
ES	Commercial cultivation started in 1998. Percentage of GM maize relative to total maize area: 2004: 12.14 %; 2005: 12.50 %; 2006: 14.76 %; 2007: 21.18 %; 2008: 22.11%. GM maize acreage for 2008: 79.269 ha.
FI	No cultivation yet
FR	MON810 is cultivated on significant surfaces since 2005. Acreage: 2005: 500 ha; 2006: 5.000 ha; 2007: 22.000 ha; 2008: 0
HU	No cultivation yet
IR	No cultivation yet
IT	No cultivation yet
LT	No cultivation yet
LU	No cultivation yet
LV	No cultivation yet
NL	No cultivation yet
PL	There are no official data confirming GM maize cultivation.
PT	Commercial cultivation started in 2005. Acreage: 2005: 772 ha; 2006: 1.254 ha; 2007: 4.199 ha; 2008: 4.851 ha (surface registered until 25 July 2008)
RO	GM maize cultivation started in 2007. Acreage: 2007: 331 ha; 2008: 7.146 ha
SI	No cultivation yet
SK	Commercial cultivation started in 2006. Acreage: 2006: 33 ha; 2007: 947 ha; 2008: 1940 ha.
SV	No cultivation yet

#### 4.2. Identified problems in relation to commercial GM maize production

AT	Not applicable
BE	Flanders and Wallonia: Not applicable
CY	Not applicable
CZ	The three-year experience of the Czech farmers growing <i>Bt</i> maize in 2005-2007 appears positive. We can observe a decrease in the European corn borer ( <i>Ostrinia nubilalis</i> ) infestation and decrease in the <i>Fusarium</i> (possibly carrying mycotoxins) infestation as a secondary effect in <i>Bt</i> maize. There are also noticed higher yields of <i>Bt</i> maize (on average by 10 %), but not in every location. On the other hand, Czech farmers identify some problems in relation to commercial GM maize production: increased administration (mandatory notification of fields) and organization (segregation measures) on farm, increased seed costs, direct (maize) and indirect (milk) problems with selling of the final product.
DE	Commercial cultivation provokes fierce discussions in society and sometimes even acts of damage of property. A huge part of the population does not have much faith in the effectiveness of co-existence measures. This is especially true for bee keeping.
DK	Not applicable
EE	Not applicable
ES	There is no agreement between stakeholders on whether a regulation on co-existence is required or not. There is a general perception that there have not been any significant problems among farmers as regards co-existence. Organic farmers could face some problems resulting from the zero tolerance for GMO content in the certification of organic products. However, the importance of organic maize in Spain is very limited and, therefore, the issue is at present not seen as being very significant.
FI	Not applicable
FR	Some farmers or associations are opposed to commercial GM maize production, anti-GMO actions including destructions are carried out.
HU	Not applicable
IR	Not applicable
IT	Not applicable
LT	Not applicable
LU	Not applicable
LV	Not applicable

NL	Not applicable
PL	Such problems are not identified up to now.
PT	2007 was marked by the destruction of a GM maize field in Algarve, which was duly condemned by the Minister of Agriculture, and by various entities and organizations connected to agriculture and by society in general. No other problems have been identified until now.
RO	Up to now there have not been any registered problems on GM maize commercialisation.
SI	Not applicable
SK	No problems identified.
SV	Not applicable

#### *4.3. Impact of the adopted co-existence legislation on the introduction of GM crops*

AT	Not applicable
BE	Flanders and Wallonia: Not applicable
CY	Not applicable
CZ	It is difficult to judge the real impact of co-existence legislation as it has been in place since commercial growing of Bt maize started in the Czech Republic in 2005. However, it is highly possible that the Bt maize area would have increased significantly more in case there would have not been any binding co-existence legislation in the Czech Republic.
DE	None
DK	Not applicable
EE	Not applicable
ES	Not applicable
FI	Not applicable
FR	It is too early to answer this question.
HU	Not applicable
IR	Not applicable
IT	Not applicable

LT	Not applicable
LU	Not applicable
LV	Not applicable
NL	Not applicable
PL	There are no data on this point
PT	The cultivation of GM maize started in 2005, and at that time already a draft legislation was discussed with the stakeholders, so despite the fact that the legislation had entered in force late September (in the maize harvest season), the seed companies had published a leaflet with some recommendations, in line with the draft measures, to farmers, that in general have been fulfilled. After the national co-existence legislation entered into force an increase of GM maize cultivation was registered, and this is continued since 2005.
RO	GM maize cultivation increased from 331 ha in 2007 (commercial crop) to 7146,44 ha in 2008.
SI	The Act is in the phase of adoption, so there is no information about the influence of future legislation to GM maize cultivation. There is no ban on GM maize cultivation in Slovenia.
SK	The adoption of the co-existence legislation in 2006 was a precondition for GM maize cultivation, but there is not a direct correlation with an increase in cultivation.
SV	Not applicable

## 5. Cross-border issues

### *5.1. Cooperation with neighbouring Member States in order to address the cross-border implications of the different national co-existence regimes*

AT	Requests for collaboration were addressed to neighbouring regions in other Member States. The answers were only to a different extent satisfying. It would be desirable to create an internet access to all intended cultivations of GM crops that are to be notified. At least the distance in kilometres from the borders where GMO are cultivated should be available. So far, cases about economic damage in Austria are not known.
BE	Flanders: Discussions with neighbouring countries/regions will be held shortly after the adoption of the decree. Wallonia: None

CY	No neighbouring Member States
CZ	There is some cooperation in place in terms of information exchange (especially with Austria and Germany).
DE	None. The affected German Länder are in contact with the relevant neighbouring States in order to get information on GM crop cultivation close to the boarder in those States.
DK	Denmark and the German state Schleswig-Holstein have established contact and had a meeting in order to discuss cross-border co-existence issues.
EE	None
ES	None
FI	None
FR	None
HU	No cooperation has been established with neighbouring Member States yet in order to address cross-border issues. However, we consider cross-border implications as an important issue and intend to work on the establishment of close cooperation with all neighbouring Member States in this regard.
IR	Yes
IT	None. (Draft measures) The guidelines advise that in areas close to borders among regional administrations the more restrictive isolation measures should be adopted by the administrations involved and, in the case of borders between States, specific bilateral agreements have to be launched involving also the concerned regions.
LT	None
LU	First contacts have been established
LV	None
NL	There have been first talks with the German "Länder" e.g. North Rhine Westphalia. There is also contact with Denmark and Belgium (Flanders), but at this moment no regular cross-border cooperation has been established.
PL	None
PT	None
RO	None
SI	None

SK	None
SV	We do not consider that the cultivation of GM maize or potato in Sweden would have any implications in neighbouring countries. There has been no communication, discussion or cooperation with neighbouring countries.

*5.2. Documented cases of economic damage resulting from cross-border admixture of GMOs or other observations of cross-border admixture*

BE	Flanders and Wallonia: None
CY	None
CZ	None
DE	None
DK	No, but as part of the Co-Extra project a case study on cross-border admixture across the Danish-German border has been carried out: <a href="http://www.coextra.eu/library/deliverables.html">http://www.coextra.eu/library/deliverables.html</a> (first report under WP7).
EE	None
ES	None
FI	None
FR	None
HU	None
IR	None
IT	None
LT	None
LU	None
LV	None
NL	None
PL	None
PT	None
RO	None

SI	None
SK	None
SV	None

*5.3. Claims that operators have difficulties implementing co-existence measures in the close vicinity to a border*

BE	Flanders and Wallonia: None
CY	None
CZ	None
DE	None
DK	None
EE	None
ES	None
FI	None
FR	None
HU	None
IR	None
LT	None
LU	None
LV	None
NL	None
PL	None
PT	None
RO	None
SI	None
SK	None
SV	None

## 6. National research activities on co-existence

### 6.1. Relevant supporting research for the development of co-existence measures

AT	<p>Seed production in segregated production processes to avoid contamination with GMOs in the context of the co-existence of conventional farming with or without GMOs and organic farming (by Girsch, L., I. Kramberger, H. Felder, R. Hochegger, K. Mechtler, A. Ratzenböck und J. Taferner, published AGES, Austrian Agency for Health and Food Safety, in May 2004) - In the study the problems and interaction involved in horizontal and vertical co-existence in seed production are presented. Actual solution approaches are offered for seed production co-existence management in Austria for the processed crop types maize, soybean, oilseed rape, sugar beet and potatoes. The study primarily deals with the aspect of genetic quality in seeds and plant propagating material. Special attention is given to ascertain, assess and avoid genetic contamination in seeds (variety identity and purity). A system was developed in Austria by the Institute for Seed and implemented in collaboration with multiplier organisations and seed multipliers to ensure the requirements of variety purity and thus preservation of seed production being free of contamination of other genetic sources.</p> <p>Koexistenz von gentechnisch veränderten, konventionellen und biologisch angebauten Kulturpflanzen in der Österreichischen Landwirtschaft - Handlungsempfehlungen aus ökologischer Sicht (by Dr. Kathrin Pascher und Mag. Marion Dolezel, published by Bundesministerium für Gesundheit, Familie und Jugend in 2005) - The study deals with the field crops maize, oilseed rape and sugar beet. The aim of the study was the compilation and evaluation of different sources of GMO contamination in conventional or organic production systems as well as the assessment of the extent of such contamination. Moreover, for each of the three field crops mentioned, Austria-specific co-existence measures were compiled as a first help for orientation considering scientific facts. Experience with co-existence from other countries (USA, Canada), which have already been growing GM crops for several years were used in order to draw up co-existence measures. The proposed measures were evaluated according to their effectiveness and feasibility in different growing areas of the respective field crops in Austria.</p> <p>Untersuchungen zur Fremdbefruchtungsrate in Maiskulturen unter Berücksichtigung der Umwelten in den Hauptanbaugebieten Österreichs (by Girsch, L., N. Angerer, N. Balarezo, J. Hartmann, C. Kargl, K. Mayr, H. Nagl, H. Zimmermann, H. Strelec, G. Laaha, published by AGES, Universität für Bodenkultur, 2006) - This study was executed in view of the implementation of scientific based directives for a co-existence management. A field design representative for a natural cultivation situation of maize in Austria was selected. On the one hand the maximum external gene flow as a successful fertilization in a castrated pollen acceptor field was measured on the other hand the specified genetic impurity caused by a successful unwanted internal gene flow (based on seed impurity) plus a successful external gene flow as cross-fertilization in a conventional waxy maize field was measured. The average of the successful fertilization related to the entire pollen acceptor field was between 4.5 % and 97.5 %. The level of genetic impurity resulting from internal (seed impurity) and</p>
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	external gene flow in the waxy maize fields was in average related between 1.8 % and 5.9 %. The highest correlation was observed when measuring the distance between the field border of the pollen donor field and the centre of the pollen acceptor field and it seems to be the most suitable way to define distances between a GMO-field and a non-GMO-field in co-existence management.
BE	Flanders: In April 2004, a general study on GMOs in Flanders by the Flemish administration was executed ( <a href="http://lv.vlaanderen.be/nlapps/docs/default.asp?id=530">http://lv.vlaanderen.be/nlapps/docs/default.asp?id=530</a> ). No further specific research (commissioned by the government) in the scope of the development of the co-existence legislation in Flanders.
DE	<p>The Federal Research Program for Securing Coexistence is executed by the Federal Research Centre for Cultivated Plants – Julius Kuehn Institute and commissioned by the Federal Ministry of Food, Agriculture and Consumer Protection (BMELV). State partner is the Agricultural Technology Center, commissioned by the Ministerium für Ernährung und Ländlichen Raum, Baden-Württemberg.</p> <p>Langhof, M; Hommel, B.; Hüsken, A.; Schiemann, J.; Wehling, P.; Wilhelm, R.; Rühl, G.2008: Coexistence in Maize: Do non-maize buffer zones reduce gene flow between maize fields? Crop Sci. 48, p. 305 – 316.</p> <p>Langhof, M. und Rühl, G. 2008: Auskreuzungsstudien bei Mais: Überblick, Bewertung, Forschungsbedarf. Berichte über Landwirtschaft 86 (1), S. 29 – 67.</p> <p>The field experiments aim at establishing a scientific data base for coexistence of GM and non-GM crops under the climatic conditions in Germany. The current focus is directed on maize, since several gm-varieties of this crop are already permitted in Europe. For this purpose different parameters are under investigation: isolation distances (24, 51, 78, 102, 150 m); non-maize buffer crops (grass/clover, cereals, sunflower); non-GM maize buffer rows at the border of the gm-field (12 vs. 24 rows); GM : non-GM field depth (1:1 vs. 2:1); orientation of the experimental plots to each other; sowing orientation of non-GM field (rows parallel and upright in respect to the GM field). The field experiments are generally designed as ‘worst case’ scenarios. Generally, all relevant data like flowering of male and female floescence of GM and non-GM maize, wind speed and direction, temperature, and rainfall during flowering are observed. Data are used from BMELV for regulations in respect to good farming practice in cultivation of GM crops.</p>
DK	For the purpose of revising the Danish co-existence rules the original scientific working group on co-existence was reassembled in order to update its scientific report on co-existence from 2003. Its findings have been published in the Supplementary Report from the Danish Working Group on the Coexistence of GM Crops with Conventional and Organic Crops from 2007: <a href="http://web.agrsci.dk/djffpublikation/djffpdf/djfm131.pdf">http://web.agrsci.dk/djffpublikation/djffpdf/djfm131.pdf</a> .
ES	In previous years, a number of studies on co-existence have been conducted, mainly on maize. The most revelant are:

	<p>Melé, E, Ballester, J. Peñas, G. Folch, I. Olivar, J. Alcalde, E. &amp; Messeguer, J. 2004. First Results of Co-existence Study. Euro/Biotech/News 3:8.</p> <p>Melé, E., G. Peñas, J. Serra, J. Salvia, J. Ballester, M. Bas, M. Palaudelmàs, and J. Messeguer. 2005. Quantification of pollen gene flow in large maize fields by using a kernel colour trait. pp289-291. In Antoine Messéan (ed), Proc. 2nd. International Conference on Co-existence between GM and non-GM based agricultural supply chains. Ed. Agropolis Productions. Montpellier, France.</p> <p>Pla M, La Paz JL, Peñas G, García N, Palaudelmàs M, Esteve T, Messeguer J &amp; Melé E. (2006) Assessment of real-time PCR based methods for quantification of pollen-mediated gene flow from GM to conventional maize in a field study. Transgenic Research :15:218-228.</p> <p>Messeguer, J., G. Peñas, J. Ballester, M. Bas, J. Serra, J. Salvia, M. Palaudelmàs, and E. Melé. 2006. Pollen-mediated gene flow in maize in real situations of coexistence. Plant Biotechnology Journal 4:633-645.</p> <p>Palaudelmàs M, Messeguer J, Peñas G, Serra J, Salvia J, Pla M, Nadal A and Melé E. 2007. Effect of sowing and flowering dates on maize gene flow. Third international conference on coexistence between genetically modified (GM) and non-GM based agricultural supply chains (GMCC-07). Sevilla, Spain. Book of Abstracts in: <a href="http://www.coexistence-conference.org/">http://www.coexistence-conference.org/</a></p> <p>Melé E, Peñas G, Palaudelmàs M, Serra J, Salvia J, Pla M, Nadal A and Messeguer J. 2007. Effect of volunteers on maize gene flow. Third international conference on coexistence between genetically modified (GM) and non-GM based agricultural supply chains (GMCC-07). Sevilla, Spain. Book of Abstracts in: <a href="http://www.coexistence-conference.org/">http://www.coexistence-conference.org/</a></p> <p>Messeguer J, Palaudelmàs M, Peñas G, Serra J, Salvia J, Ballester J, Bas M, Pla M, Nadal A and Melé E. 2007. Three year study of a real situation of coexistence in maize. Third international conference on coexistence between genetically modified (GM) and non-GM based agricultural supply chains (GMCC-07). Sevilla, Spain. Book of Abstracts in: <a href="http://www.coexistence-conference.org/">http://www.coexistence-conference.org/</a></p> <p>Ortega Jose I. Coexistence of Genetically Modified, conventional and organic crops, VIENA (Austria), del 4 al 6 de abril de 2006. Ponencia titulada: The Spanish experience with co-existence after eight years of cultivation of GM maize. Book of Abstracts in: <a href="http://www.coexistence-conference.org/">http://www.coexistence-conference.org/</a></p> <p>Ortega Jose I. Second international Conference about Co-existence between GM and non-GM based agricultural supply chains (GMCC 05), Montpellier (Francia), 14 y 15 de Noviembre de 2.005. Ponencia titulada: The Spanish Experience. Book of Abstracts in: <a href="http://www.coexistence-conference.org/">http://www.coexistence-conference.org/</a></p>
FI	<p>Enabling the Coexistence of GM Crops and Conventional and Organic Farming in Finland. Mid-Term Report, 31 May 2005, Expert Work Group on Coexistence, Ministry of Agriculture and Forestry, Finland, 88 p., <a href="http://wwwb.mmm.fi/julkaisut/tyoryhmamuuistiot/2005/trm2005_9a.pdf">http://wwwb.mmm.fi/julkaisut/tyoryhmamuuistiot/2005/trm2005_9a.pdf</a>.</p>

The Ministry of Agriculture and Forestry appointed an Expert Working Group in February 2004 to prepare the recommendations for measures and instructions for enabling the coexistence of GM, conventional and organic agriculture in Finland. The task of the Expert Work Group was to draw up a report on: (a) Agronomical measures enabling coexistence. The study must be founded on scientific evidence on the likelihood of the admixture of GM and other crops and sources of admixture. (b) Economic impacts of coexistence and sharing of responsibilities. Coexistence measures must be functioning and cost-efficient. Measures may not cause unreasonable economic consequences to farmers or seed producers. The Working Group had also to go through the Finnish legislation on liability for damage to see whether this provides sufficient and equal opportunities to the different parties to practice their business. (c) Regional measures, which should be applied to crop species and types of production applicable for the Finnish conditions (e.g. seed production vs. other crop production). The regional aspects to be accounted for also include the share, number and type of GM crops in the region, climate conditions, soil, topography, crop rotation and farm structure as well as the surrounding area, such as forests, uncultivated land and location of arable lands. (d) Administrative decisions and changes in the legislation which may be needed as well as new control and inspection systems to be introduced.

Muuntogeenisten viljelykasvien sekä tavanomaisen ja luonnonmukaisen maataloustuotannon rinnakkaiselon mahdollistaminen Suomessa. Rinnakkaiselon ohjaustyöryhmän loppuraportti, 12.12.2005, Maa- ja metsätalousministeriö, 51 s. [Enabling the Coexistence of GM Crops and Conventional and Organic Farming in Finland. Final Report, Dec. 12, 2005, Guidance Panel on Coexistence, Ministry of Agriculture and Forestry, Finland, 51 p. In Finnish], [http://wwwb.mmm.fi/julkaisut/tyoryhmamuistiot/2005/trm2005\\_16.pdf](http://wwwb.mmm.fi/julkaisut/tyoryhmamuistiot/2005/trm2005_16.pdf). The report contains essentially the information presented in the Mid-term report (see above), accompanied with juridical and economical studies and recommendations for the outlines of the legislative measures necessary for organizing coexistence practices in Finland.

Erkki Hollo (2006). Maatalouden tuotantomuotojen keskinäissuhteista aiheutuva vastuu. Oikeudellista vastuuta koskeva selvitys (MTVO). Maa- ja metsätalousministeriö, kesäkuu 2006, 41 s. [Liability originating from the mutual relations between different production systems in agriculture. A study of juridical liability. Prof. Erkki Hollo, Univ. of Helsinki. Ministry of Agriculture and Forestry, June 2006, 41 p. In Finnish], <http://wwwb.mmm.fi/julkaisut/muut/MTVO.pdf>.

Jussi Tuomisto (2005). Coexistence of GM and non-GM potato varieties on Finnish potato farms – potential costs and remedies, 9th ICABR International Conference on Agricultural Biotechnology: Ten Years Later. Ravello (Italy), July 6 to July 10, 2005, 21 p., [www.economia.uniroma2.it/conferenze/icabr2005/papers/Tuomisto.pdf](http://www.economia.uniroma2.it/conferenze/icabr2005/papers/Tuomisto.pdf).

FR

INRA (French National Institute for Agricultural Research) participates in the European programmes COEXTRA and SIGMEA.

Arvalis (a technical research institute) has carried out research for three years

	<p>(2002-2004) on Bt maize. The aim of the programme (POECB: programme opérationnel d'évaluation des cultures issues des biotechnologies) was to study the feasibility of coexistence between GM crops and non GM crops, to study the benefits of Bt maize, to set up procedures to ensure traceability from the field to feed products. <a href="http://www.agpm.com/en/iso_album/poecb_1.pdf">http://www.agpm.com/en/iso_album/poecb_1.pdf</a></p>
HU	<p>Research regarding maize pollen flow was carried out in 2003. The original goal was to define an appropriate isolation distance for Part B releases. The research was published in Hungarian in 2004 with the following title: "Study on GM maize pollen flow" (see annexed to this document). The Central Agricultural Office issued a book with the title "Gene technology and product safety". One chapter of the book contains the pollen flow study results.</p>
IT	<p>The Region of Piemonte requested to the University of Torino a study with the title "Introduction of GM crop cultivation in Piemonte: agronomic, cultivation and chain organization aspects", which was carried out in 2007. The objective of the study was, amongst others, an evaluation of the impact on the agricultural system of Piemonte resulting from the introduction of GM crop cultivation. Different scenarios were formulated with a variation of factors, such as prices, yields and coexistence measures. The research institutions involved in the preparation of the study are: the Department of Valorisation and Protection of the Agri-Forestry Resources, the Department of Agriculture, Forestry and Management of the Territory, the Department of Economy, the Institute of Social and Economic Research.</p> <p>"Research on the knowledge concerning the potential impact on the territory of Toscana resulting from to the introduction of GMOs and the effects on ecosystems, the rural economy and the institutional system" by ARSIA, Region of Toscana; Year: 2004-2006; scientific coordinator: Professor Marcello Buiatti, University of Florence, Department of Animal Genetic Biology "Leo Pardi".</p> <p>"Coexistence between GM crop cultivation with conventional and organic crops in the context of the agriculture of Umbria", University Of Perugia, with Professor Fabio Veronesi.</p>
NL	<p>In 2006 and 2007, field trials were performed to address the effects of the two isolation distances indicated by the Dutch Coexistence Committee, i.e. 25 m between GM and conventional maize cultivation, and 250 m between GM and deliberately non-GM (e.g. organic) maize cultivation, on pollen-mediated gene flow (PMGF) under realistic agronomical conditions in The Netherlands. Levels of the transgene in grain samples from the receptor fields were measured by a validated real-time PCR quantification method for the MON810 event. Each isolation distance was tested at three different locations across The Netherlands in both years. For testing PMGF with the 25 m isolation distance, GM source fields of 100 x 100 m (1 ha) were surrounded at all four sides by equally sized non-GM receptor fields at a distance of 25 m. For testing PGMF with the 250 m isolation distance, 1-ha GM source fields were surrounded by 50 x 50 m (0.25) ha receptor fields in four different directions at 250 m. For the GM source field, the maize variety DKc3421YG containing the MON810 event was used with both distances. A maize cultivar near-isogenic to the GM cultivar was grown in the receptor fields to obtain good flowering synchronicity between GM and non-GM maize and thus</p>

	<p>optimal conditions for PGMF. Analyses showed the following levels of grain admixture as a consequence of PMGF, averaged across twelve fields for each isolation distance tested: at 25 m 0.084 % (individual field averages ranged between 0.009 % and 0.296 %) in 2006 and 0.080% (0.002 % to 0.318 %) in 2007, resp., and at 250 m 0.005 % (individual field averages ranged between 0 and 0.040 %) in 2006 and 0.007 % (0 to 0.037 %) in 2007, resp. Although weather conditions were quite different between 2006 and 2007 (a hot and dry summer in 2006 vs. a relatively wet one in 2007), outcrossing rates did not differ significantly between years.</p>
PL	<p>The programme „Environment and economical aspects of GM crops in Poland” will be realised under the supervision of the Ministry of Science. This research will be executed by national scientific institutions. Moreover, the Plant Breeding and Acclimatisation Institute, supervised by the Ministry of Agriculture, will realise in the framework of its multi-annual scientific programme, work on the subject „Assessment of introducing GM plants into agricultural production”.</p>
RO	<p>Elena Marcela Badea and P.I. Otiman, 2006. GM plants in agriculture. Agronomic, ecologic and economic impacts. P. 1-219, Mirton Edit., Timisoara. The book is an introduction for Romanian readers regarding the factors, conditions, and modalities that have generated spectacular growth of using GM crops in the world. The authors present the most recent and relevant information of interest for farmers, information concerning the agronomic (technological), ecological and economic advantages associated with the use of the products obtained through modern biotechnology. A special chapter of this book is dedicated to gene flow in connection with coexistence measures. The information found in this book also addresses and it is useful to those involved in the authorization process, risk assessment and monitoring of GM crops.</p> <p>Bodea, Monica, L.A. Mărghitaş, D.Pamfil, D. Dezmirean, I. Haş, C. Coroian, L. Muntean, Rodica Pop, 2007. The efficiency of different DNA isolation protocols in six cultivars of oilseed rape (<i>Brassica napus</i>). International Beekeeping Symposium, May, 3-5, 2007. University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca. The main aim of this study was to obtain a high purity of DNA from six cultivars of <i>Brassica napus</i>. This was a first step for future studies to use RADP and AFLP fingerprinting for revealing gene flow via pollination of oilseed rape.</p> <p>Săndoiu, D.I., V.G. Ghiţă, Nicoleta Dumitrescu, Mihaela Obrişca, 2006. The agronomic impact of using some GMP in Romanian agriculture: GM soybean - herbicide resistance. Communications at Romanian Academy with the theme “Agriculture biotechnology in Romania” October, 11, 2006. The authors present a study about the coexistence of GM soybean – herbicide resistance with conventional and organic farming. <a href="http://www.academiaromana.ro/com2006/docBioteh/c05-DumitruSandoiu.ppt">http://www.academiaromana.ro/com2006/docBioteh/c05-DumitruSandoiu.ppt</a></p> <p>Elena Marcela Badea, Roşca I., Madoşă E., Ciocăzanu I., 2004. Romanian Biosafety Research: Current Approaches and Developments. In: J.P. Nap, A. Atanasov, W. Stiekema, eds., Genomics for Biosafety in Plant Biotechnology: New Challenges, IOS Press, NATO Science Series, Serie 1, Life and Behavioral Sciences, vol. 359, 191-199. The study used non-GM maize for assessing the</p>

pollen flow in the western part of the country (Agricultural University – Timisoara). A sweet maize line (susu) was placed at 7 different distances (0.7; 20; 40; 60; 80; 100; 150 and 200 m) in all four directions from a central source of normal pollen (SuSu). To evaluate the frequency of gene flow at different distances from pollen source, all ears from the sweet maize capture strips were harvested at maturity and the number of normal and sweet grains on each cob was counted. On the average, the cumulative pollen capture at a distance of 40 m was over 90 % in all directions, except for the East, with a variation from 20 to 100 m. The results suggested that the condition for coexistence could be achieved.

Meglič, V., Šuštar Vozlič, J., Čergan, Z., Zagorac, B. Coexistence of genetically modified plants with conventional and biological production (2005) Agricultural Institute of Slovenia, commissioned by Ministry of Agriculture, Food and Forestry. The aim of the study was to prepare guidelines for the development of strategies for coexistence in Slovenia and the development of optimal technologies for coexistence of GM crops with conventional and organic crop production under the specific conditions of Slovenian agriculture. The study was elaborated on the basis of EU legislation and guidelines respecting the current Slovenian legislation in this field. The outcome of the study was that coexistence is possible. In the agriculture production system the principles of good agricultural practice should be introduced in all the steps of the production chain from farm to fork. The importance of conducting research and field trials also in Slovenia was stressed.

Žel, J. Strategy of coexistence of GM crops with conventional and ecological agriculture (2006), National institute of Biology, Večna pot 111, Ljubljana, commissioned by Ministry of Science and technology and Ministry of Environment and Spatial Planning. Purpose of the coexistence part of the study was to do a survey on existing knowledge on coexistence from literature and other available sources, to define stakeholders and experts in Slovenia who could support development of strategies and legislation in coexistence. Special focus was dedicated to maize, oilseed rape and soy. Legislation developing at that time in other countries was followed. Some general guidance was given.

Meglič, V. et al. 2005: Coexistence and preservation of biodiversity in agriculture (agrobiodiversity): specific technologies of crop production and preservation of biodiversity of agricultural crops. Agricultural Institute of Slovenia, commissioned by Ministry of Environment and Spatial Planning. In the frame of the study an overview of plant species and transformation events that would be interesting for crop production in Slovenia was compiled. We have focused on events that are permitted in the EU and events that are envisaged to get permission in the near future. That includes maize, oilseed rape, potatoes, sugar beets and some vegetable crops. We have made an overview of agricultural species, local populations and old Slovenian cultivars that are possible receivers of GM constructs and as well an overview of possible locations where it could come to unintended presence. Possibility of GM plant production is connected to the intensity of crop production, which we described as the share of fields and vegetable gardens to other agricultural surface use. Growth dynamics have been described for GM donors and GM receivers of main agricultural species. If appropriate measures for prevention of unintended presence in ex-situ and in-situ conditions are followed, the coexistence in Slovenia would be possible. According to experiences in other EU countries, we have proposed, for preparation of

SI

optimum production technologies, a set of field trials as well in Slovenia. In the same manner, we would have to prepare a strategy for in-situ and in-vivo conservation of genetic resources in coexistence, for Slovenian conditions.

Šuštar-Vozlič, J., et al. 2006. Elaboration of risk assessment for non-deliberate release of genetically modified oilseed rape, maize and potato in Slovenia, and the preparation of a proposal for the environmental monitoring. Agricultural Institute of Slovenia, commissioned by Ministry of Environment and Spatial Planning. The aim of the study was to prepare a basis for the elaboration of risk assessment for non-deliberate release of genetically modified oilseed rape, maize and potato in Slovenia, and to prepare a proposal for the environmental monitoring. Transport routes on the territory of Slovenia were described in details for all the studied crops. Critical points where non-deliberate release of GM plants in the environment may occur were identified. Chains for seed and commercial material were described separately. Information on production, processing and foreign trade of oilseed rape, maize and potato in the period between 2001 and 2006 was acquired from different already existing data collections (e.g. Statistical Office of RS, Phytosanitary Administration of the Republic of Slovenia, Agricultural Economics Department of the Agricultural Institute of Slovenia, Chamber of Commerce and Industry of Slovenia). Questionnaires were also sent to a large number of suppliers along the whole chain in order to provide information on produced, processed and stored quantities of crops, storage locations, imported quantities according to the country of origin and transport ways and purpose of use of the produced or imported seed, grain of oilseed rape and maize and ware potato in the years from. Approximately 1/3 of questionnaires were received back, others considered the data as business secret. Due to specificity of each crop, a uniform approach for elaboration of risk assessment and monitoring could not be established; therefore three different systems were proposed, one separate for each crop.

Šuštar-Vozlič, J., et al. (2007) Elaboration of a proposal for thresholds for labelling the presence of GM seeds in other seeds, Agricultural Institute of Slovenia, commissioned by Ministry of Environment and Spatial Planning. In the study an overview was given of the current state of the art on the GM seed thresholds in EU. In the absence of seed regulation the situation and current praxis in individual member state was presented. Emphasis was given to legal base, labelling and inspection. In the second part of the study critical points in the seed supply chain where unintended or technical unavoidable presence of GMOs could occur were identified. The share of unintended presence of GM seeds that could occur at each critical point was estimated for each of the studied crop (maize, oilseed rape, potato, sugar beet). The cost/benefit analysis was conducted for potato and oilseed rape.

2002-2006: ECOGEN (Soil ecological and economic evaluation of genetically modified crops); 5th FP EU project, Institute Jozef Stefan Jamova 39. Ljubljana, commissioned by the European Commission.

2004-2007: SIGMEA (Sustainable Introduction of GMOs into European Agriculture), 6th FP EU project, Institute Jozef Stefan Jamova 39. Ljubljana, commissioned by the European Commission.

## 6.2. Coexistence research currently taking place in the Member States

Institution carrying out the research: AGES. Commissioned by: Ministry for Agriculture, Forestry, Environment and Water Management. Description: Goal is to obtain new scientific and representative results for coexistence management in Austria under realistic cultivation conditions for maize by carrying on the study "Analyses of gene flow in *Zea mays* in consideration of the environment in main cultivation regions in Austria" which was finalised in 2006, to gain additional data and to secure the present results.

Flanders: Devos, Y. (2008). Transgenic crops: a kaleidoscopic impact analysis, PhD thesis, University of Ghent, Belgium (ISBN 978-90-5989-220-0) and all his other relevant publications in international peer-reviewed journals, proceedings and reports, mentioned in this work: ([http://www.criticalphilosophy.ugent.be/publications/pub\\_yann.htm](http://www.criticalphilosophy.ugent.be/publications/pub_yann.htm)).

Wallonia: Search for feral transgenic rapeseed in the environment of the Walloon Region – Janssen et al. – Poster - 1<sup>st</sup> Global Conference on GMO analysis – Côme – Italia (Centre wallon de Recherches Agronomiques – Gembloux) – Commissioned by the public authorities.

Study of selected factors influencing adventitious/unintended presence of GMO and biodiversity in the context of coexistence of GM, conventional and organic crops” – Crop Research Institute with financial support of the Ministry of Agriculture (National Agency for Agricultural Research, project no.1B53047). The aim of this project is to look into technical possibilities of spatial isolation of GM crops in selected areas of the Czech Republic. Acquired data can be used when the Good Agriculture Practice dealing with the release and monitoring of GM crops will be put into practice. The project is also focused on the monitoring of changes in farming practices on the farm level once GM crops are commercialized.

One State’s programme in Saxony deals with Bt-maize. The design of this research field is predominantly directed to other topics and its use for coexistence is very limited. This part is called „Untersuchungen zur Absicherung der Koexistenz zwischen Betrieben mit und ohne Anbau von GV-Sorten (Auskreuzung)“ and is carried out by the Sächsische Landesanstalt für Landwirtschaft, commissioned by the responsible States' ministry.

The Danish breeding company DLF-Trifolium A/S participates in the EU project TRANSCONTAINER whose target is to develop efficient and stable biological containment systems for GM plants. The Institute of Food and Resource Economics, Faculty of Life Sciences at the University of Copenhagen, participates in the COEXTRA project. The institute leads Workpackage 3 where the scope is to assess the internal and external costs and benefits generated by the implementation of coexistence and traceability.

There is an administrative arrangement between the Ministry of Environment, Rural and Maritime Affairs and the National Institute of Agricultural and Food

Research and Technology which aims at analysing gene flow in cotton.

GMO Research Program ESGEMO (Research Programme on Environmental, Societal and Health Effects of GMOs 2003–2007), organized by the Academy of Finland, ended recently, and its results are in preparation for publication. For the aims of the research program see [www.aka.fi/Tiedostot/Tiedostot/ESGEMO/ESGEMO%20ohjelmamuistio\\_Programme%20memorandum.pdf](http://www.aka.fi/Tiedostot/Tiedostot/ESGEMO/ESGEMO%20ohjelmamuistio_Programme%20memorandum.pdf)

F I Some of its projects may provide biological information useful in defining coexistence measures adequately for the Finnish cultivation conditions.

F R INRA (French National Institute for Agricultural Research) participates in the European programmes COEXTRA and SIGMEA.

I R Appropriate isolation distance for oilseed rape, conducted by Teagasc Crop Research Centre, Oakpark, Carlow

N L Research is done to provide a science based monitoring system to be used in case of commercial cropping (this system is currently under construction).

A tree year “Coexistence” Project was completed, and the first results of that work have been disseminated through the DGADR Internet page. It is estimated that the final report will be issued in 2008. The main goals of this study is to create a “Manual of Best Practices for the Coexistence for Maize” as well as the evaluation, under real conditions, of the technical measures for minimizing the adventitious presence of GMO, set forth in the national legislation and evaluate possible proposals of amendments to the legal technical measures. This project is financed by the AGRO programme. It is conducted by DGADR and by the National Institute of Biological Resources in partnership with the Agricultural College of Santarem, the ANSEME, the ANPROMIS, the AGROBIO and the Regional Directions of Agriculture and Fishing of Lisbon & Tejo Valley, Center and North. The progress reports of this project are available at [www.dgadr.pt](http://www.dgadr.pt).

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The project “Coexistence of GM, conventional and organic crops” is financed and monitored by the Ministry of Agriculture and Rural Development and executed by the Agriculture Research and Development Station Turda in co-operation with the University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca. Gene flow with non-transgenic crops is studied using phenotypic and biochemical markers. This test system was used i.e. in Spain (“The Spanish experience with coexistence after eight years of cultivation of GM maize” presented by Jose Ignacio Ortega Molina at the conference "Coexistence of GM, conventional and organic crops – freedom of choice" from 4-6 April 2006 in Vienna, Austria) and in Germany (M. Langhof, B. Hommel, A. Hüsken, J. Schiemann, P. Wehling, R. Wilhelm and G. Rühl, 2008. “Coexistence in maize: do non-maize buffer zones reduce gene flow between maize fields?” *Crop Science* 48:305-316). Part of the research project is the study of the gene flow between GM and conventional crops (oilseed rape, maize and soybean) and ensuring the coexistence between the conventional and the transgenic crops. The first phase of the research work was to measure the pollen-mediated gene flow among some non-GM oilseed rape (*Brassica napus*) varieties and uncertain gene flow from

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oilseed rape to *Sinapis* spp. as a wild species, by using RAPD and AFLP fingerprinting for revealing gene flow via pollination of oilseed rape. For revealing gene flow via pollination in soybean (*Glycine max*), we will study the hybrids resulted by crossings between plants with violet flowers and plants with white flowers. For maize (*Zea mays* L.) two phenotypic markers will be used for revealing gene flow: 1. crossings between the plants with red grains (*R*-gene) and plants with yellow grains (*Y* gene); 2. crossings between conventional maize and sweet maize (*sugary-1* gene).

Study on the impact of conventional maize-specific technology and GM maize-specific technology systems, at the farm level, on the biodiversity, yield quality and quantity. Grant supported by the Ministry of Agriculture and Rural Development (2008 -2010). Currently, in Romania, through the Order of the Ministry of Agriculture and Rural Development (MADR) no. 237/2006, the isolation distance between different cropping systems is the one used for seed production. One of the objectives of this project is to assess the efficiency of the measures imposed through legal requirements regarding the application of coexistence measures for different agricultural systems (with and without the use of GM plants). Samples from conventional maize plants surrounding the GM maize field located in different ecological regions will be harvested for analysis using standardized methods. Data obtained will be analyzed by correlation with the climate, cropping system and landscape, assessing also the feasibility of coexistence at local level.

Study conducted by Monsanto Romania SRL in cooperation with the Agricultural University of Bucharest regarding the Bt pollen dispersion for coexistence arguments. The collected samples are being analyzed both in Romania and in France.

Harmonisation of technologies for following GMOs in food and feed production chain and their co-existence with conventional and ecological production chains, Agricultural Institute of Slovenia (dr. Vladimir Meglič), Hacquetova 17, 1000 Ljubljana, commissioned by Slovene Research Agency, Ministry of Agriculture, Food and Forestry and Ministry of Environment and Spatial Planning. There are three work packages (WP1-3), that are led by three research institutions; WP1 Kmetijski inštitut Slovenije – Agricultural Institute of Slovenia, WP2 Nacionalni inštitut za biologijo – National Institute of Biology and WP3 Inštitut Jožef Stefan – Jozef Stefan Institute. The work within each WP is conducted by researchers from all three institutions. Within WP1 the spatial and time systems of field production are determined and defined, along with crop rotations, good agricultural practice and traceability of GMO food products. Within WP2 we are developing methodology for data analysis as a support for a decision making and as well optimizing the traceability of GMOs. The system will be adaptable to traces as well the other contaminants in the agricultural practice. WP3 will combine all collected and other available data in the field production, e.g. wind, air pressure and humidity, orographic data, field structure, time dynamics of the field production, and prepare a simulation for different widths of the safety belts in maize production.

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Guidelines for a national strategy of the preservation of forest trees genefonds due to the introduction of GMOs in agriculture, University of Ljubljana,

Biotechnical Faculty, Jamnikarjeva 101, 1000 Ljubljana (dr. Robert Brus) commissioned by the Slovene Research Agency, Ministry of Environment and Spatial Planning. Part of this study deals with co-existence in GM trees.

Protection against unintended release of GMOs and other biotic agents (phytopathogenic microorganisms) in the environment, National institute of biology, Večna pot 111, 1000 Ljubljana, commissioned by Slovene Research Agency Ministry of Defence. Apart from the National institute of biology, the Agricultural institute of Slovenia, the Biotechnical Faculty of the University of Ljubljana, and the Slovenian institute for Hop Research and Brewing were also involved in the project. Descriptions of supply chains for tomato, silage maize, potato, and grain maize were prepared for the Slovenian market and included the prediction of possible critical points for the release of GMOs into the environment. The existing traceability systems and technical instruction for establishing traceability and segregation systems within the supply chains for potato, tomato, and maize were described in detail. We identified production areas in Slovenia where a possibility for unintentional spread of GM maize exists. The results and findings of the project were presented to the international public at different scientific meetings, and two workshops were organized in Slovenia which were attended by experts from different state institutions responsible for both parts of the project - GMO and plant pathogenic microorganisms.

Co-Extra FP6-FOOD-2005-7158: GM and non-GM supply chains: their CO-EXistence and TRAcability, Agricultural Institute of Slovenia, Hacquetova 17, 1000 Ljubljana and National Institute of Biology, Večna pot 111, 1000 Ljubljana, Institute Jožef Stefan, Jamova 39, commissioned by the European Commission. Within the work of Agricultural Institute of Slovenia in WP2 (Supply chain analysis, description and modelling), that analyses how to facilitate co-existence along the feed and food chains by characterizing the organizational schemes of supply chain product management from the farm to the fork, KIS is responsible for national description of silage maize and fresh tomatoes supply chains. The work was extended to collect data also for grain maize and potatoes in Slovenia. The aim of KIS work within WP4 (Development of testing and sampling approaches) is to develop a reliable sampling procedure for maize plants in the field in a situation of coexistence (model for fragmented landscape with very small field sizes). A two year field trial with two maize varieties differing in kernel colour was designed. Based on the attributes describing the properties of boundary layer that were measured during the growing period and collected data on outcrossing rate a prediction model for the spatial variability of outcrossing rate was developed using data mining techniques. The results of the model and selected statistical measures were used for development of different sampling schemes. Based on all the results a decision support system for selection of the most acceptable/reliable sampling procedure will be developed.

Meglič, V. et al. 2006-2009. Traceability of GM crops in the food and feed production (L4-7573-0401-06), Agricultural Institute of Slovenia, Commissioned by the Slovenian Research Agency and Ministry of Agriculture, Forestry and Food. The objectives of the proposed research work are to develop technical guidelines for establishment the system of traceability and efficient sampling scheme for specific conditions of relative small field size, from the field to the point where the sample is taken for the analysis. Existing and experimental

information gained from this study on gene flow of the GM crops targeted will be collated and synthesised, points of reducing risks during the various post-field phases from field to the store will be identified and evaluated. Appropriate molecular tools for tracing and detection of GM crops will be applied and validated.

Meglič V., 2008-2010. The influence of gene flow, genetic diversity and variability and oilseed rape production technologies on coexistence and fulfilment of requirements for sustainable production. Commissioned by the Slovenian Research Agency and Ministry of Agriculture, Forestry and Food. The results of the research will allow an estimation of the effects of gene flow and oilseed rape production technologies on the fulfilment of requirements for sustainable and health food production. The project will address the spatial, environmental and genetic point of view. From the spatial aspect the project will be analysed on two levels, the level of Slovenia and on the level of landscape. The research conducted will be focused on the spatial aspect and also on the environmental problems related to the gene flow in the oilseed rape production. Basic characteristics of oilseed rape presence within (volunteer and feral populations) and outside production areas (feral populations), as well as the presence of seeds in the soil seed bank will be addressed. This aspect will survey relationships between environmental factors and factors influencing type of farming (agrotechnical measures). The environmental aspect will address appearance of volunteer and feral populations, their influence on the soil seed bank and on their growth and development in subsequent generations. The influence of the past and present type of production on the gene flow between different oilseed rape populations as well as the exchange and transfer of genes from wild relatives in natural environment will be discussed. The research will enable development of co-existence strategy of different ways of oilseed rape production on the territory of Slovenia (conventional, GM and biological) as well as the development of a strategy needed for the preservation of biodiversity of wild oilseed rape relatives in Slovenia. The research project will be carried out in co-operation with the Jožef Stefan Institute.

Vozlič J (2008) Traceability of oil seed rape plants across the Slovenian roadways Agriculture institute of Slovenia, Hacquetova17, 1000 Ljubljana, commissioned by Ministry of Agriculture, Food and Forestry. The samples of oilseed rape grown near roadways will be taken and the analysis on GMO will be made.

In Slovenia also the annual monitoring on GM food, feed and seed is done.