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Genetically Modified Organisms - background and latest EU developments

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This paper provides a brief overview of the origins of Genetically Modified Organisms and their regulation and use across the EU and specifically within Northern Ireland and the Republic of Ireland. The paper also assesses the potential implications for Northern Ireland as a result of proposed changes to the EU mechanisms covering the authorisation and cultivation of GM crops.

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Key Points

- A Genetically Modified Organism (GMO) has been genetically altered in a way that does not occur naturally through fertilisation or natural recombination. GMOs may be plants, animals or micro-organisms, such as bacteria, parasites and fungi;
- Genetically Modified (GM) food has become a growing feature of the modern world with the major focus being on GM crops;
- The jury is still very much out on GMOs in terms of their potential benefits or risks. The technology is so new that there is very little longitudinal and independent evidence;
- Within the EU, GMOs can only be authorised for cultivation or consumption if they pass a rigorous and independent safety assessment undertaken by the European Food Safety Authority (EFSA);
- EU law provides mechanisms whereby the release of GMOs can be modified, suspended or terminated when the safety of the product is called into doubt;
- Traceability is an integral part of EU law around GMOs enabling the monitoring and checking of food and feed labelling;
- Individual EU member states have responsibility for managing the cultivation of GMOs within their national territory through the development of national co-existence legislation;
- At present GM crop production in Europe is very limited and there are only 2 approved GM crops actually being grown – Bt maize and Amflora potato;
- Some EU countries have embraced the cultivation of GM crops whilst others have implemented a de facto ban;
- GM Animal feed will be increasingly common across the EU due to member states not being self sufficient in animal feed;
- Northern Ireland currently appears to have no agreed Government position on GMOs and their cultivation with the Environment and Agriculture and Rural Development Ministers appearing to have diametrically opposed views;
- The Ulster Farmer's Union is generally in favour of GMOs providing requirements around public confidence, safety of the products and full traceability are met;
- At present there are no GM crops being grown within Northern Ireland or the Republic of Ireland;
- The Irish Government's current Programme for Government commits the Republic of Ireland to becoming a GM free zone, free from the cultivation of all GM plants;
- The European Commission is planning to bring forward new proposals aimed at changing the existing rules on GMO cultivation within the EU. The proposals are due to be published in the middle of July 2010;

- The proposals are likely to result in a relaxation and re-interpretation of co-existence guidelines for GMOs which will see EU countries being given greater autonomy to either ban or increase the cultivation of GM crops within their territory;
- The current Westminster GMO position is hard to determine but Caroline Spelman MP, the new Secretary of State for the Environment, Food and Rural Affairs appears to be in favour of GMOs and their application;
- The devolved administrations in Scotland and Wales, both of which are cautious in their approach to the cultivation of GMOs, are on record as wanting to see the full devolution of any new powers regarding GMOs to their respective legislatures;
- Both Scotland and Wales are exploring their options to secure the devolution of these powers. Utilising the provisions of the Subsidiarity Protocol within the Lisbon Treaty is one such mechanism being actively explored.

Executive Summary

Genetically Modified Organisms (GMOs) play an increasingly significant role within the production of food and feed stuffs across the world. Public and indeed scientific opinion has been split on the potential benefits and risks from the production of these so called 'Frankenstein Foods' since their gradual introduction in the 1990's.

Whilst the public and scientific debate continues to rage national governments and more corporate bodies such as the European Union have sought to develop legislation in an attempt to regulate the cultivation and use of Genetically Modified Organisms. Within the EU the developed legislation has resulted in what could be characterised as a largely precautionary approach to the cultivation of GMOs. Whilst countries such as the USA, Argentina and Brazil have wholeheartedly embraced GM technology, the EU has only approved 2 GM varieties for cultivation within its boundaries over the last 12 years, compared to more than 150 worldwide. In addition whilst GM crops account for over 134 million hectares of cultivated land across the world, within the EU during 2009 there were only 100,000 hectares cultivated with GM crops.

Even with this cautious approach a number of individual EU countries including Austria and Luxembourg have taken the arbitrary decision to ban the cultivation of even EU approved GMOs within their national territory. Moves such as this have proved to be controversial and have resulted in the World Trade Organization for example ruling against the EU in a case brought by a number of GM cultivating countries.

Within Northern Ireland there are currently no GM crops being cultivated. There would also appear to be differing views taken on the approach to GMOs by those departments and Ministers directly responsible. The Department of the Environment has the lead for GMO policy development and this responsibility covers the cultivation of GM crops and the deliberate release of GMOs into the environment in Northern Ireland. Environment Minister Edwin Poots, and his party would appear to be in favour of the use of GMOs. The Department of Agriculture and Rural Development has responsibility for European law regarding seed licensing and the importing of feedstuff. DARD Minister Michelle Gildernew and her party are on record as wanting to see the island of Ireland as a GM free zone.

Similarly to Northern Ireland there are currently no GM crops being cultivated within the Republic of Ireland. Responsibility for GMOs within the Republic of Ireland is spread across a number of government departments including The Department for the Environment, Heritage and Local, the Environmental Protection Agency (EPA), the Department for Health and Children and The Department of Agriculture and Food. The Fianna Fáil and Green Party coalition government which came to power in 2007 is largely hostile to the cultivation of GMOs within the Republic of Ireland. The Irish Government's renewed Programme for Government published in October 2009

commits the government to declaring the Republic of Ireland a GM Free Zone, free from the cultivation of all GM plants

The European Commission seems set to bring forward proposals aimed at changing the existing EU rules on the cultivation of GMOs within the EU. The specific details of these proposals have yet to be formally published but are likely to appear on the 13th July. It appears that there will essentially be two main elements to the proposals. Firstly individual member states within the EU will be given greater power to ban the cultivation of GM crops on their territory due to a relaxation and re-interpretation of the co-existence guidelines. Secondly there are also indications that European legislation relating to the deliberate release of GM organisms in the environment, may be amended to extend the current safeguard clause to enable states to ban the cultivation of GM crops on socio-economic grounds.

The formal adoption of these proposals is likely to result in the creation of a 'twin track' approach to the cultivation of GM crops across the EU. From a UK perspective the formal adoption of the proposals will mean that the UK government along with the other 26 EU member states will have the power to decide whether to ban outright or increase the cultivation of GM crops. Where this may become contentious is in relation to the approach of the devolved administrations in Scotland, Wales and Northern Ireland. At present both Scotland and Wales have a cautious approach to the cultivation of GM crops which may be at odds with a Westminster government approach formulated by a GM supporting DEFRA Minister in the form of Caroline Spelman MP. Both the Welsh Assembly and Scottish Parliament are currently exploring the potential of using the Subsidiarity Protocol within the Treaty of Lisbon as a way of securing devolved decision making around GMO policy.

In the light of these developments the challenge for the Northern Ireland Executive is to establish if it is pro or anti the cultivation of GM crops within Northern Ireland? Having established this position and given that the EC proposals around changes to GMO policy are likely to emerge in mid July will the Northern Ireland Executive need to decide whether to join with the Scottish Parliament and Welsh Assembly in seeking to secure the devolution of these powers?

Contents

1. Genetically Modified Organisms (GMOs) – definition and origins.

According to the European Food Safety Authority (EFSA) a Genetically Modified Organism (GMO) is one "*in which the genetic material has been altered in a way that does not occur naturally through fertilisation and/or natural recombination. GMOs may be plants, animals or micro-organisms, such as bacteria, parasites and fungi.*"[1]

The Idea of enhancing particular traits through breeding and cross breeding is not a new one but conducting this process through the deliberate and precise manipulation of genetic code is a relatively recent development. Whilst there is no definitive landmark date regarding the first development of a genetically modified organism the conventional view is that the technology came of age in the early 1990's. The early days of this new technology were marked by high profile media exposure for cases such as the 'flavr savr'[2] tomato which had been genetically modified to increase its shelf life and in terms of animal experimentation, Dolly the sheep[3], who had the distinction of being the first cloned mammal.

From these relatively humble beginnings in the early 1990's Genetically Modified Organisms have gone on to make up an ever increasing impact on the production of food, feed, medicines and industrial products.

2. The potential benefits and risks of GMOs.

The relative newness of GM technology means that in some ways the jury is still out in terms of the potential benefits and risks around genetically modified organisms, due to the lack of longitudinal evidence. The following table provides a general overview of what are generally accepted to be the main issues and concerns at this particular point in time. Most of these concerns and issues relate to issues around GM crops which has been the area that has seen the most growth in terms of volume and interest.

Potential Benefits	Potential risks
Pest resistance – crops can eliminate the need for chemical pesticides, decreasing costs and increasing yields	**Unintended harm to other organisms** – pollen from some GM plants can be fatal to some beneficial insects in agriculture – non discriminatory in nature
Herbicide tolerance – enables the spraying of herbicides to kill weeds which can not be physically removed cost effectively.	**Reduced effectiveness of pesticides** – harmful insect pests may become resistant to GM crops and as such be resistant to known pesticides.
Disease resistance – increases yields	**Gene transfer to non target species** – GM crop plants which are herbicide tolerant may cross breed with weeds resulting in the creation of 'superweeds'.

[1] European Food Safety Authority website - GMO pages
[2] The case of the 'flavr savr' tomato, G Bruening and J.M Lyons, California Agriculture, August 2000
[3] Science Museum website

Cold tolerance – reduces the risk to crop yields from frost and potentially extends growing season and locations	**New allergies** – introducing a gene into a plant may lead to the creation of a new allergy or cause an allergic reaction in susceptible individuals
Drought tolerance/salinity tolerance – potentially extends the growing season and areas suitable for planting in many parts of the world	**Unknown effects on human health** – no long term empirical evidence to determine positive or negative impacts
Nutrition – GM crops can be created to contain additional levels of existing or new nutrients.	**Economic concerns** – GM crops are costly to develop and as such the cost to farmers to purchase them will be higher – particular impact on small farmers and 3rd world
Pharmaceuticals – GM plants can produce cost effective and edible vaccines, improving 3rd world health in particular	
Phytoremediation – GM plants such as trees can clean up soil or groundwater pollution, bringing previously unusable land back into use.	

It should also be noted that given the fast moving pace of this form of technology it is likely that the list of potential benefits and risks could well grow over the coming months and years. In addition, the collection of more real life data could well mean that some or all of these current potential issues and concerns will be proven or disproven to be true.

3. The current situation regarding regulation of GMOs within the EU.

3.1 Authorisation of GMOs.

Within the EU genetically modified (GM) foods can only be authorised if they pass a rigorous safety assessment. (EC) Regulation No 1829/2003[4], which was implemented in April 2004 sets out the procedures for the evaluation and authorisation of GM food and feed within the EU and as such applies to the following 3 types of specific product:

- Food and feed containing GMOs;
- Genetically modified organisms for food and feed use;
- Food and feed produced from or containing ingredients produced from GMOs.

Regulation 1829/2003 also stipulates that food and feed products containing GMO material should be labelled as such in order to enable consumers to make informed decisions. Interestingly this stipulation does not apply to foods or feeds where the GMO proportion is no higher than 0.9% of the total food ingredients providing that this presence is *'adventitious (accidental) or technically unavoidable'*.

3.2 The Deliberate release of GMOs.

Directive 2001/18/EC[5] which came into force in March 2001 was designed to make the release and placing on the market of GMOs more efficient and transparent. A key

[4] (EC) Regulation No 1829/2003 on genetically modified food and feed, September 2003.
[5] (EC) Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms, March 2001

feature of this Directive is that it places a ten year (renewable) limit on release and reaching the market for GMOs whilst also introducing compulsory monitoring once a GMO has made it onto the market. With regard to the actual process of risk assessment, Directive 2001/18/EC also provides a common methodology and a means to allow the release of GMOs to be modified, suspended or terminated where new information becomes available that calls into doubt the safety of the product.

3.3 Traceability.

The need for traceability throughout the food chain is also important component of the EU's legislation relating to GMOs and this is addressed in Regulation (EC) No 1830/2003[6]. This Regulation which was approved in 2003 allows for the monitoring and checking of information given on labels and the monitoring of effects on the environment. In addition there is also provision for the withdrawal of GMOs which have the potential to pose a threat to human or animal health.

3.4 Independent assessment.

The independent assessment and evaluation of any GM product, essential to the granting of authorisation, is conducted by the European Food Safety Authority (EFSA)[7]. EFSA has a responsibility to assess any potential risks to human and animal health and the environment and to pass its findings to the European Commission and individual member states who are ultimately responsible for actually authorising the use of a GMO. Individual member states are also responsible for the actual monitoring and inspection of products.

3.5 Individual member state responsibilities including co-existence legislation.

Individual EU members also have autonomy when it comes to the question of how they actually mange the cultivation of an EU approved GMO within their national territory. This a critical issue as the EU's approach to GMOs, and GM crops in particular, is often characterised as being based on the principle of co-existence. In simple terms this means that GM (providing they are EU approved) and non GM crops should be grown together providing there is sufficient segregation. Since 2003 the EU has urged member states to develop their own national legislation to deal with co-existence[8] issues including segregation distances between GM and non GM crops and liability should cross fertilisation between GM and non GM crops occur.

[6] (EC) Regulation No 1830/2003 concerning the traceability and labelling of genetically modified organisms, September 2003
[7] European Food Safety Authority website
[8] EC Recommendation on guidelines for the development of national strategies and best practices to ensure the co-existence of genetically modified crops with conventional and organic farming, July 2003

4. The current situation regarding usage of GMOs within the EU.

In terms of cultivated land, GM crops accounted for less than 100,000 hectares of land across the 27 countries that make up the EU in 2009, compared to the global figure of 134 million hectares.[9] These figures highlight the fact that in global terms EU countries are minor players when it comes to the cultivation of GM crops.

This situation is even more acute due to the fact that vast majority of the 100,000 hectares of land planted with GM crops is to be found within just one EU country, namely Spain.

In terms of the actual type of crops approved for growing, the EU also lags behind the rest of the world. Over the last 12 years only two GM varieties (Bt maize and Amflora potato[10]) have been approved compared to more than 150 worldwide.

The low levels of planting and approval of GM products within the EU are largely attributed to public concerns around food safety sparked by issues such as BSE and dioxins in food during the 1990's. These factors undoubtedly contributed to the development of EU legislation which could be characterised as precautionary in its approach to the approval and use of GM foods.

Even with this precautionary approach to GMOs it is interesting to note that a number of EU countries have arbitrarily taken the decision to ban the cultivation of an EU approved GMO (namely Bt maize) within their territory. Countries including Germany[11], Greece, Luxembourg, Austria, Hungary and France have used the provisions found within Regulation (EC) No 1830/2003 to ban the cultivation of GMOs on the grounds that they pose a threat to human health and the environment. As a result of this stance the countries have found themselves at odds with the European Commission, World Trade Organisation and many of the GM companies and the position has been challenged legally.

With regard to the issue of GM animal feed within the EU, 18 individual GMO's have been authorised for import and processing as animal feed[12]. This list includes 12 varieties of maize, 2 varieties of soya bean, and 1 variety each of oilseed rape, sugar beet, cotton and potato. Only 3 of these GMOs have been licensed for cultivation within the EU, whilst the other 9 join the large number of GMOs which can be and are currently grown by large scale commodity exporting countries such as the USA, Brazil and China.

A critical factor here is that the EU is not self sufficient in animal feed. FEFAC, the European Feed Manufacturer's Federation estimated that in 2008 the 27 countries

[9] International Service for the Acquisition of Agri-Biotech Applications - Brief 41, 2009
[10] BASF website - Amflora potato overview
[11] Eat,Drink..better website, Germany to join other European countries in ban against Monsanto's genetically modified MON810 corn, April 15th 2009.
[12] EC approved list of GM products - food and feedstuffs - 2010

which make up the EU imported 45 million tonnes of animal feed material from sources outside the EU. The Food Standards Agency within the UK recognises that *"98% of the soya bean meal imported by the EU is sourced from Brazil and Argentina, which are major producers of GM soya. Brazil and Argentina also supply the EU with significant quantities of maize for starch manufacture, the by-products of which go for feed use; much of this will be GM*[13]*."*

Given the scale of feed imports required to meet the needs of agriculture across the EU it seems fair to say that feed materials sourced from outside the EU will increasingly be made up of GM derived products.

5. Current Position in Northern Ireland regarding GMOs.

As things currently stand there are no GM crops being grown within Northern Ireland. In line with most other parts of the EU however food and animal feed using GM material is freely available subject to meeting the previously outlined regulations.

As a region within one of the 27 EU member countries Northern Ireland is subject to the same previously outlined EU Regulations and Directives relating to GMOs. The Department of the Environment (DOE) has the lead responsibility for GM policy within Northern Ireland. The DOE is responsible for the regulation of the cultivation of GM crops and the deliberate release of GMOs into the environment.

The Department of Agriculture and Rural Development's (DARD) remit is strictly limited to the enforcement of European law governing seed certification and the importing of animal feeding stuffs. DARD's remit in relation to GM does not cover the cultivation of GM crops.

The Food Standards Agency (FSA) operates UK-wide and is the lead department for GM food and feed safety and for GM labelling. The Department of the Environment, Food and Rural Affairs (DEFRA) and its Devolved counterparts such as DARD are responsible for agricultural and environmental aspects of GMOs. The Food Standards Agency leads on the GM food and feed regulation (EC) 1829/2003. Authorisations under this regulation typically include the import and processing of GM grain and, potentially, cultivation within the EU.

Within Northern Ireland it would appear that there are differing views at a ministerial level in relation to the approach taken to GMOs. DARD minister Michelle Gildernew, in a speech made at the Terra Madre Ireland 2008 conference on food and farming policy,[14] emphasised that, *"Once we go down the GM route there is no going back: we need to keep Ireland GM-free. And I think that issue – we might not fully recognise it now, but in a very short period of time we could have a unique selling point that nobody else in the world has. And I think as an island economy, we have to protect our status."*

[13] Food Standards Agency, UK - website article - GM material in animal feed, 19th March 2009
[14] GM free Ireland, Press Release, 10th September 2008.

Minister Gildernew's position is also in line with that of her party, Sinn Fein, who in their 2009 European Parliament election manifesto included a commitment to *'oppose all EU plans to allow genetically modified(GM) crops to be grown in Ireland'*.[15]

DOE Minister Edwin Poots would however appear to favour the wider use of GM products given his stance in response to Assembly Question AQW2525/10[16] on the introduction of measures to ban the growing of GM crops. In responding the Minister revealed that he had *"..no plans to ban the growing of GM crops in Northern Ireland".* It should also be noted that the Minister's party, the DUP, in their publication 'Supporting and Sustaining Rural Northern Ireland' advocated *"…that pressure is exerted from all quarters to ensure Northern Ireland farmers have access to feed grown with GM technology."*[17]

Neither Sinn Fein nor the DUP had any policy commitments relating to GMO's or GM food specifically within their most recent manifestos for the 2010 Westminster Election.

The Ulster Farmer's Union (UFU) is generally of the opinion that "*genetically modified plant organisms represent technical progress in the agricultural industry and should be supported".* This tacit support however is dependent upon a number of requirements being met such as there being consumer confidence in GM products, all GM crops needing to be independently approved by the EU and that all GM products are fully labelled and traceable. In addition the UFU advocates the provision of safeguards for farmers who grow GM products to ensure that they are not held liable for any future issues due to the production or consumption of GM crops.[18]

On the issue of co-existence in January 2007 the Department of the Environment (DOE) consulted stakeholders on proposals for managing the coexistence of GM and non-GM crops in Northern Ireland, should approved GM varieties be grown here commercially in the future. To date these proposals have not progressed beyond consultation and the DOE are awaiting further developments at an EU level before progressing.[19]

6. Current Position in the Republic of Ireland regarding GMOs.

There are currently no GM crops being cultivated within the Republic of Ireland. As in Northern Ireland and the rest of the EU however GM food and animal feed is freely available for use subject to meeting the previously outlined regulations.

Responsibility for GMOs within the Republic of Ireland is spread across a number of government departments. The Department for the Environment, Heritage and Local

[15] Sinn Fein European Election Manifesto, 2009
[16] Assembly question AQW2525/10, Mr B Wilson MLA, 5th November 2009
[17] Sustaining Rural Northern Ireland, DUP publication.
[18] Genetically Modified Organisms, Position Paper, Ulster Farmers' Union, 9th February 2001
[19] Department of the Environment (NI), Summary of responses to the public consultation on the department's proposals for the co-existence of GM and non GM crops in Northern Ireland, 2007

Government has responsibility for setting policy relating to GMOs, and is supported by the Environmental Protection Agency (EPA) which implements and monitors GMO regulations, and the Department for Health and Children which is responsible for the food safety aspects of GMOs. The Department of Agriculture and Food also plays a role through the regulation of seeds, animal feed and through the development of a national strategy for the co-existence of GM and non GM crops.

The Fianna Fáil and Green Party coalition government which came to power in 2007 is largely hostile to the cultivation of GMOs within the Republic of Ireland. In their original Programme for Government published in 2007 the partners stated their intention to *"seek to negotiate the establishment of an All-Ireland GM Free Zone"*[20]. This intention did not lead to legislation but did see the Irish choosing not to vote in support of the authorisation of new GMOs within the EU. The Irish Government also backed Austrian proposals for the European Commission to allow individual states to ban GM crops.[21]

The Irish Government's renewed Programme for Government[22] published in 2009 also makes the following commitments:

- We will declare the Republic of Ireland a GM Free Zone, free from the cultivation of all GM plants.
- To optimise Ireland's competitive advantage as a GM free country, we will introduce a voluntary GM Free logo for use in all relevant product labelling and advertising, similar to a scheme recently introduced in Germany.

To date no new legislation has emerged to enable these commitments to be achieved.

7. European Commission Proposals relating to Genetically Modified Organisms.

The European Commission seems set to bring forward proposals aimed at changing the existing EU rules on the cultivation of GMOs within the EU. EU president Manuel Barroso signalled his intention to overhaul the EU's approach to GMOs in the EC forward work programme published in March 2010. The forward work programme contains a commitment to *"..come forward by the end of June with a concrete initiative on how to allow freedom for Member States to decide about the cultivation of GMOs on their territories."* [23]

This commitment has led to formal proposals which are being developed by Health and Consumer Affairs Commissioner John Dalli. The specific details have yet to be formally published but are likely to appear on the 13th July. Informed sources in the media[24] are

[20] Programme for Government,Republic of Ireland, 2007-12
[21] GM Free Ireland website
[22] Renewed Programme for Government, Republic of Ireland, 10th October 2009
[23] European Commission Workplan 2010, Annex II page 15, 31st March 2010
[24] Reuters website, EU to overhaul GM crop system, 4th June 2010.

of the opinion that there will essentially be two main elements to the proposals as follows.

Firstly, individual member states within the EU will be given greater power to ban the cultivation of GM crops on their territory due to a relaxation and re-interpretation of the co-existence guidelines. This step would enable individual states to effectively set their own technical standards for 'safe' GM farming. This would provide a means for states to declare GMO free regions that could potentially cover all their national territory if co-existence safeguards could not be met.

Secondly there are also indications that European Commission Directive 2001/18[25], relating to the deliberate release of GM organisms in the environment, may be amended to extend the current safeguard clause to enable states to ban the cultivation of GM crops on socio-economic grounds.

The net effect of these proposals, which will require the agreement of the majority of EU governments and the European Parliament is likely to be the creation of a 'twin track' approach to the cultivation of GM crops across the EU. The easing of rules around co-existence may well lead to a greater number of new GMOs being authorised for cultivation within the EU and this in turn could see an increase in GM crop cultivation within 'GM friendly' EU countries such as Spain and the Czech Republic. At the same time, and as previously stated, other EU countries are likely to use the proposals as a way to totally ban the cultivation of GM crops within their territory.

There are no known proposals to change the existing arrangements relating to the labelling, importation or use of GM food or animal feed within the EU.

8. Implications of EC proposals relating to GMOs – UK and Northern Ireland.

As mentioned previously within this paper the likely impact of the European Commission's proposals around GMOs, if they are passed by EU member states and the European Parliament, is an increased ability for individual EU member states to effectively set their own policy on the cultivation of GM crops within their national territory.

In a UK context this potentially means that Westminster, as the national parliament, will have the ability to either allow the cultivation of more GM crops or ban their cultivation entirely within the UK depending on the approach taken to co-existence rules.

The new UK coalition government's stance on GMOs is not particularly clear at this time. The coalition's Programme for Government published in May 2010[26] makes neither reference nor commitment to anything pertaining to GMOs. In the absence of

[25] (EC) Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms, March 2001
[26] The Coalition : our programme for government, HM Government, May 2010.

an 'agreed' coalition stance it is hard to assess how Westminster GMO policy will respond to the European Commission proposals. Looking at the Conservative and Liberal Democrat manifestos it is notable that only the Conservatives make any mention of GMOs or GM food[27]. To this end their pre election position included the following commitments:

- ensure that consumers have the right to choose non-GM foods through clear labelling; not permit any commercial planting of GM crops until and unless it has been assessed as safe for people and the environment;
- develop a legally-binding protocol covering the separation of GM and non-GM material, including clear industry liability

The new coalition Secretary of Sate for the Environment, Food and Rural Affairs, Caroline Spelman MP, appears to be in favour of GMOs and their application. In her first interview after being appointed she publicly stated that she was in favour of GM foods in the *"the right circumstances"* and *that "the principle of GM technology is (OK) if used well. The technology can be beneficial."*

A pro GM cultivation stance in Westminster may well pose a challenge for Northern Ireland and the other devolved administrations in Wales and Scotland if this will is imposed upon them. Both the Welsh Assembly and Scottish Parliament are cautious in their approach to the cultivation of GM crops. Scotland for example *"..intends to maintain a moratorium on planting GM crops in Scotland. This respects the consumers who demand locally-produced conventional and organic food[28]"* whilst in Wales, *"..the Welsh Assembly Government's long-standing position is to adopt the most restrictive policy on GM crops that is compatible with European Union and UK legislation. It is not legally possible to declare Wales GM-free, but we will continue our restrictive approach[29]."* As stated previously within this paper, compared to the Scottish and Welsh examples it is hard to determine a 'governmental' position with regard to the cultivation of GMOs within Northern Ireland.

The guiding principle in relation to this issue for both the Scottish Parliament and Welsh Assembly is the need to ensure that powers relating to the cultivation of GM crops are a devolved responsibility. The Welsh Minister for Rural Affairs, Elin Jones, for example when commenting on the issue of the cultivation of GM crops stated that she wished *to "..ensure that this power is devolved fully to Wales in order to allow this Assembly to make decision with regard to GM policy on Welsh soil."* If these powers were fully devolved Northern Ireland, Scotland and Wales would technically have the ability to ban or increase GM crop cultivation within their territory. The question remains however as to whether Westminster will devolve these powers.

[27] Invitation to join the government of Britain, Conservative Party Manifesto, 2010, page 97
[28] Scottish Parliament Website, Genetic Modification Position
[29] The Ecologist Website, GM-free Europe - how we could still ban GMOs, 21st October 2009

Interestingly there is a Concordat[30] on the Implementation of EC Directive 2001/18 on the deliberate release into the environment of genetically modified organisms and Regulation (EC) No.1946/2003 on transboundary movements of genetically modified organisms. This document which is not legally binding sets out the agreed framework for co-operation between the Department of the Environment in Northern Ireland (DoENI), the Department for Environment, Food and Rural Affairs (Defra), the Welsh Assembly Government (WAG). as the executive for the National Assembly for Wales, and the Scottish Executive (SE), on the administration and coordination of the stated EU legislation relating to GMOs. The Concordat reveals that responsibility for the regulation of GMO deliberate releases and transboundary movements of GMOs belongs to the devolved administrations within Northern Ireland, Scotland and Wales [31], but there is no evidence that this concordat has been tested.

The EU requirement for the UK to negotiate and act as a single entity at a European level is also addressed within the Concordat. Point 9 of the document reveals that,

'"*UK lines on the development of EU policy matters or on applications presented by other Member States should be* ***agreed between the four Territorial Competent Authorities (TCAs) (England, Scotland, Wales and Northern Ireland)*** *before EU level negotiations take place. Defra will represent the UK on the basis of this agreed line3. In agreeing UK lines,* ***every effort should be made by the four TCAs to reach agreement****, including (if necessary) embarking on the procedure set out in the Concordat on co-ordination of European Union policy issues4, providing that a common line can be agreed within the necessary timescales5.* ***If this is not possible, the UK negotiating position should be set by the UK Government on the basis of expert scientific advice, and taking into account the views of the devolved administrations, in order that the UK can take part in EU level discussion and decision making.***"

An area of concern emerging from this point is that if agreement cannot be reached the UK Government has the ability to set the UK negotiating stance. Given the differing views on GMOs this raises the potential for both a lack of an agreed UK GMO position and the subsequent imposition of a Westminster position that may well be at odds with that of the devolved governments.

Given these uncertainties both the Welsh Assembly and Scottish Parliament are currently exploring the potential of using the Subsidiarity Protocol within the Treaty of Lisbon[32] as way of securing devolved decision making around GMO policy. Under Article 2 of the Protocol, the European Commission is required to consult widely before proposing legislative acts. The consultation the Commission undertakes should also *"where appropriate, take into account the regional and local dimension of the action*

[30] Concordat on the implementation of Directive 2001/18/EC and Regulation 1946/2003/EC, 3rd April 2007.
[31] Concordat on the implementation of Directive 2001/18/EC and Regulation 1946/2003/EC, 3rd April 2007, Point 5.
[32] Protocol on the application of the principles of subsidiarity and proportionality, 13th December 2007.

envisaged"[33]*.* Article 6 within the protocol provides *for "..each national parliament or each chamber of a national parliament to consult, where appropriate, regional parliaments with legislative powers.*[34]*"*

At this point in time it is hard to tell whether the efforts being made in relation to the Subsidiarity Protocol will bear fruit with regard to the devolution of GMO powers as this is very much untested water. To quote from a Scottish Parliament Information Centre briefing *"..whilst the provisions relating to subsidiarity have been welcomed by parliaments across the European Union, the challenge that now faces them will be to ensure they can take advantage of them.*[35]*"*

It also needs to be realised that moves by individual EU member states or regions within them to ban the cultivation of GM crops may well see those countries or regions coming under scrutiny and potential sanction from the World Trade Organization (WTO). As alluded to previously within this report, in a 2006 ruling[36] on a case brought by GM producing states such as Canada and the USA against the EU for delaying or banning the authorisation, cultivation and importation of certain GM products the WTO found in favour of the GM producing countries.

In the light of these likely developments around GMOs the devolved administration within Northern Ireland needs to clarify a number of key issues as follows:

- Is the Northern Ireland Executive pro or anti the cultivation of GM crops within Northern Ireland?
- Given the proposals likely to emerge from the EC regarding GMO regulation in mid July will the Northern Ireland Executive join with the Scottish Parliament and Welsh Assembly in seeking to secure the devolution of these powers?

[33] Protocol on the application of the principles of subsidiarity and proportionality, 13th December 2007, Article 2.
[34] Protocol on the application of the principles of subsidiarity and proportionality, 13th December 2007, Article 6.
[35] The Subsidiarity Protocol in the Treaty of Lisbon, Briefing Paper, The Scottish Parliament, 24th April 2008
[36] European Communities - Measures affecting the approval and marketing of biotech products, Finds and conclusions paper, World Trade Organization, 26th September 2006