



## **GM Food Survey 2004**

**Food labelled with “GM free” type declarations**

**June 2005**

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## **1. SUMMARY**

The Food Safety Authority of Ireland (FSAI) has recently completed a survey of foods carrying labels that indicate they do not contain genetically modified (GM) ingredients (GM free type labels).

Out of a total of 24 food samples tested for GM ingredients, three were found to contain low levels of Roundup Ready soya while one contained trace amounts of GM maize.

In addition, the labelling of 23 foods was examined separately to determine why they carried GM free type labels despite the fact that it was not evident that any of the ingredients listed could have a GM source. Eighteen out of the 21 manufacturers contacted responded to the FSAI request for information about the GM free type labels. Four of the manufacturers agreed that such labelling may not be appropriate on their products and consented to address the issue while eight other responses satisfied the FSAI that the products in question contained ingredients that could be produced from a GM source. However, the remainder contended that the use of such labelling was appropriate for their products even though the foods in question did not contain ingredients with a possible GM origin.

## **2. BACKGROUND**

### **2.1 Food Safety Authority of Ireland - Competent Authority for Genetically Modified Food in Ireland**

The FSAI is the Competent Authority for GM foods in Ireland and is charged with enforcing EU and national legislation governing GM food (Regulations EC No. 1829/2003 & EC No. 1830/2003). Only authorised GM food and food ingredients are allowed on the EU market and they must be labelled appropriately. By carrying out regular surveys of the food supply, the FSAI monitors the level of compliance with GM food legislation and utilises the results to educate the industry about GM food regulations and their enforcement within the EU and Ireland.

### **2.2. Previous GM Food Surveys by FSAI**

One of the first GM food studies carried out by the FSAI (published in 2001) targeted tortilla chips and taco shells to determine whether or not they contained GM maize ingredients. The results showed that 73% of the samples tested (19 out of 26) contained GM maize and those identified had been authorised for food use within the EU. Because the GM ingredient was present at less than 1% of the entire ingredient, there was no legal requirement for specific GM labelling. However, packaging of one of the samples containing GM maize carried the claim “no GM corn used” on its label.

A second survey (published in 2002) focused on soya-based foods including dried soya meat substitutes, soya dairy alternatives and soya infant formulae. Eighteen out of the 37 foods analysed (49%) were found to contain GM ingredients, of which 15 were identified as the authorised Roundup Ready GM variety. None of the GM positive samples contained more than 1% of a GM ingredient while five carried GM free type claims.

The third survey (published in 2003) examined breakfast cereals, baby foods, snack foods, dried soya products, soya and maize flours and bakery products. The results showed that 12 of the 75 samples tested (16%) contained GM ingredients. Nine samples were shown to contain Roundup Ready soya, 1 contained Bt176 maize and the remaining 2 were unidentified. None of the GM-positive samples contained more than 1% GM material and thus GM specific labelling was not required. GM free type labels were carried on 19 of the foods sampled, 6 of which (32%) were found to contain some level of GM ingredient.

In 2004, 14 sweetcorn maize and 6 popcorn maize samples were subjected to DNA analysis but no GM ingredients were detected.

The full reports can be viewed at: <http://www.fsai.ie/surveillance/index.asp#gm>

While no breaches of GM food legislation were identified by any of the previous survey results, the issue of GM free labelling was identified as a potential problem.

### **2.3. Legislation Regulating GM Food in the EU and Ireland**

GM food in Ireland is governed mainly by EU legislation (Annex 1). The authorisation and labelling of GM food within the EU is governed by the GM Food and Feed Regulation (EC No. 1829/2003) and also by the Traceability and Labelling Regulation (EC No. 1830/2003).

A GM food must not have adverse effects on human or animal health or on the environment, must not mislead the consumer and must not differ from the food it is intended to replace to such an extent that its normal consumption would be nutritionally disadvantageous for the consumer. The authorisation process for GM food is set out in Articles 5 to 7 of the GM Food and Feed Regulation (EC No. 1829/2003) while information to assist in the preparation of the application dossier is detailed in Regulation EC No. 641/2004.

The labelling requirements for food or food ingredients containing or produced from GMOs are detailed in Articles 12 and 13 of the GM Food and Feed Regulation. Specific GM labelling is required where more than 0.9% of a food or ingredient is produced from, or contains a GMO, and this requirement is not dependent on the presence of GM DNA or protein. Specific GM labelling is not required if the GM content is no more than 0.9% of the food or ingredient and provided its presence is adventitious or technically unavoidable. The threshold applies to the ingredients considered individually, or to the whole food where a food comprises a single ingredient. To avail of this exemption, operators must

be able to show that they have taken appropriate steps to avoid the presence of GM ingredients. Like all food, GM food is also subject to the general food labelling Directive (2000/13/EC, SI No. 92 of 2000) which is based on the principle that labelling must not mislead the purchaser.

## **2.4. Authorised GM Foods**

GM ingredients authorised for food use are listed on the European Commission website:

[http://ec.europa.eu/food/dyna/gm\\_register/index\\_en.cfm](http://ec.europa.eu/food/dyna/gm_register/index_en.cfm)

Currently, one GM soya bean variety, 12 GM maize varieties, 6 GM oilseed rape varieties and 5 GM cotton varieties are authorised for food use in the EU. Most of these crops have been genetically altered to tolerate the application of specific herbicides or resist attack by certain pests.

## **2.5. GM Free Type Labelling**

The terms “GM free”, “Non-GM”, “Made with no GM ingredients” etc. have no legal definition. However, consumers are likely to interpret such declarations to mean that a food carrying any of those claims does not contain any GM ingredients. It is now apparent that some sections of the food industry voluntarily apply these labels to food without ensuring that the food actually does not contain GM ingredients. Many EU Member States, including Ireland do not recommend “GM free” type labelling as is not required by law, is difficult to validate and is frequently misused by the industry.

The GM labelling threshold provided for in the GM Food and Feed Regulation (EC No. 1829/2003) requires that a food or ingredient be labelled if it has a GM content of more than 0.9%. This “labelling threshold” is intended to cater for adventitious contamination that may occur as a result of mixing during production, processing, storage or transport. However, this does not mean that foods with a GM content of less than 0.9% are considered “GM free”. The voluntary labelling of food as “GM free” or words to that effect is covered by the general food labelling legislation and, as with all labels, its accuracy is the responsibility of the operator. A food that contains any level of GM ingredient should not bear a GM free type label as it is clearly misleading to the purchaser in breach of the general food labelling Directive (2000/13/EC).

The general food labelling Directive clearly states that labelling should not mislead consumers by associating special characteristics with a food when all other similar foods possess the same characteristics. For example, to label milk as “GM free” could mislead consumers to believe that GM milk is available on the market when as yet there is no such product available.

## **3. METHODOLOGY**

Of the 47 food products purchased in 2004 for this survey, 16 were sampled in counties Cork and Waterford by Environmental Health Officers while the remainder were purchased by the FSAI in health food shops and

supermarkets in Dublin. All of the samples carried labels stating that the food was GM free, made with non-GM ingredients, or wording to that effect.

Foods that had soya or maize in the list of ingredients were subjected to DNA analysis to determine whether or not GM ingredients were present.

Food products that carried GM free type labels but where soya or maize did not appear in the list of ingredients were not subjected to DNA analysis. Instead, the FSAI requested information by letter (Annex 2) from the manufacturers about the accuracy and justification of the GM free type labels. The letter also informed them of the legislation governing food labelling and the FSAI interpretation, where applicable.

#### **4. RESULTS**

The analytical DNA results presented in this report relate solely to the individual batches tested, and do not necessarily reflect the GM status of those food products in general.

While GM ingredients were not detected in the majority of samples (Table 1), four out of the 24 food samples tested (17%) were found to contain low levels of GM ingredients. One sample contained GM maize while three contained Roundup Ready (RR) GM soya. Two of the GM positive products were produced by a UK based company, some of whose products had previously been found to contain low levels of GM ingredients despite carrying GM free type claims (<http://www.fsai.ie/surveillance/index.asp#gm>).

GM ingredients were not quantified for this survey since their presence or absence in a food was sufficient to determine the accuracy of the GM free type labels.

**Table 1: Foods tested for GM ingredients**

Product	Batch	Best Before	Claim	GM result
Direct Foods Sosmix	L4264/2/4	01/03/2006	Made from non-genetically modified soya beans	RR soya
Direct Foods Burgamix	L4299/2/1	01/04/2006		
EcoMil instant soya drink powder	19804 22347361-A	01/07/2006	GMO free ingredients (controlled from origin)	RR soya
Free & Easy vegetable gravy sauce mix	4288/05	-	GM free. (non-GM) in ingredients list	GM maize
Soya Soleil soya milk	U291216:11	12/07/2005	GMO soya beans with full traceability and tested by independent labs	-
Provamel alpro-soya soya milk	U291422:22	12/07/2005	non-GMO soya beans	-
Daily Surprise probiotic live yoghurt	E07& E11	05/11/2004	GM free	-
Sitar potato tikki pepper raita flavour	04/06/2004	04/07/2005	GM free	-
Julian Graves caramel fudge flapjack	-	18/03/2005	Contains no GM material	-
Julian Graves tomato, red pepper & chilli pasta	TRPC 102 1033	01/06/2007	GM Free. No GM products	-
Clearspring brown rice Miso soup	-	31/05/2006	Non GM (logo)	-
Free & Easy cheese flavour sauce mix	4236/01	31/08/2005	GM free. (non-GM) in ingredients list after cornstarch	-
Naturally Good vegetable gravy powder	4183/01	31/01/2006	GM free	-
Marigold Swiss vegetable bouillon powder	4200	01/12/2005	contains no genetically modified material	-
Granose meatless mince & onions	60154 4160\1A	30/06/2006	made from non-GM soya beans	-
Granose sausaltas	60150 4224/1D	31/08/2006		
Dragonfly organic beany	-	17/12/2004	no GM ingredients	-
Whole Earth organic tomato ketchup	4069024116	01/04/2007	contains no genetically engineered ingredients	-
Heinz farley's rusks gluten free	08103154 3293	01/04/2005	"we do not use GM ingredients" within text	-
Cow & Gate Sunday Dinner	CBO3408:12	30/01/2006	no GM ingredients	-
Simply Organic chunky vegetable organic soup	-	08/12/2004	non GM; No G M ingredients	-
Provamel alpro-soya dairy-free alternative to yoghurt.	C472000:35	26/12/2004	Non GMO soya beans. Sourced from non-GMO soya bean plantations, with full traceability, tested by independent labs	-
Provamel alpro-soya dairy-free alternative to yoghurt - Yofu plain	1450309.1	08/12/2004		
Irish yoghurts probiotic live yoghurt	-	24/12/2004	GM free (with logo on back)	-

A total of 21 companies were contacted regarding GM free type claims (Table 2) made on foods that did not have maize or soya on the ingredients list. Eight companies provided details of minor ingredients in their foods that could have a GM source along with documentary evidence to show that these ingredients were from a non-GM source. The ingredients included glucose syrup from maize, soya lecithin, rapeseed oil, hydrolysed vegetable protein and citric acid from fermented beet molasses. Six companies did not identify any ingredients in their products that could have a GMO origin, but insisted that such labelling was justified for their products despite the information provided by the FSAI. Four other companies accepted that GM free labelling may be inappropriate for their foods and consented to address the matter.

**Table 2:** Claims on foods that were not subjected to DNA analysis

- GMO free
- G M free
- 100% GMO (genetically modified) free
- Free from GM ingredients
- GM free. No GM products
- GM free. No GM ingredients
- No G. M. ingredients
- No G. M. substances
- No GM materials
- No genetically modified material
- No GM ingredients. Genetically modified organisms are avoided
- Non-GM. (Conservation grade – “we don’t believe in GM foods”)
- Made without GM materials
- Made with no genetically modified ingredients

## 5. CONCLUSION

The FSAI monitors the Irish marketplace to ensure that only authorised GM food is on sale in Ireland and that it is labelled appropriately. While no breaches of the GM food legislation have been identified through any of the FSAI surveys carried out to date, the accuracy of voluntary GM free type labels is an issue that has been highlighted. The results of this survey show that some foods may contain low levels of GM ingredients even though they carry declarations to indicate that no GM ingredients are present. Of particular concern to the FSAI is that some in the food industry are aware that their products may contain low levels of GM ingredients but they persist with GM free type labels regardless.

Many foods are labelled to indicate they are GM free despite the fact that none of the ingredients could possibly have a GM source. This would indicate that such labels are often used as a marketing ploy rather than to inform consumers.

Consumers should be aware that there is no legal definition of “GM free” and that certain sections of the food industry are misusing such labels. Due to the global nature of the food supply in general, and the fact that maize and soya are not grown in Ireland, it is increasingly difficult, though not impossible, to guarantee that any food containing maize or soya ingredients will be free of GM ingredients. However, it is the responsibility of food business operators to ensure that all labelling is accurate.

The FSAI has requested that retailers remove all batches of foods carrying GM free type labels identified in survey as containing GM ingredients. In the best interests of the consumer, food business operators are warned that the FSAI will continue to test foods with GM free type labels and that legal proceedings will be considered where products bearing GM free type labels are found to contain any level of GM ingredients.

## **ANNEX 1**

### **Relevant legislation**

All relevant GM food legislation can be found at the following webpage:

[http://www.fsai.ie/legislation/food/legislation\\_gmos.asp](http://www.fsai.ie/legislation/food/legislation_gmos.asp)

All relevant food labelling legislation can be found at the following webpage:

[http://www.fsai.ie/legislation/food/legislation\\_labelling.asp](http://www.fsai.ie/legislation/food/legislation_labelling.asp)

Specific links and references are given below:

[Council Directive 2000/13/EC](#) (OJ L109, p29, 06/05/2000) of 20 March on the approximation of laws of the Member States relating to the labelling, presentation and advertising of foodstuffs

European Communities (Labelling, Presentation and Advertising of Food stuffs) Regulations, 2002 ([S.I. No. 483 of 2002](#))

[Regulation 1829/2003](#) (OJ L268, p1, 18/10/2003) of 22 September 2003 on genetically modified food and feed

[Regulation 1830/2003](#) (OJ L268, p24, 18/10/2003) of the 22 September 2003 of the European Parliament and of the Council concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC

[Commission Regulation 641/2004](#) (OJ L102, p14, 07/04/2004) of 6 April 2004 on the detailed rules for the implementation of Regulation 1829/2003 of the European Parliament and of the Council as regards the application for the authorisation of new genetically modified food and feed, the notification of existing products and adventitious or technically unavoidable presence of genetically modified material which has benefited from a favourable risk evaluation

[Directive 2001/18/EC](#) of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC

## ANNEX 2

### Template letter requesting information from manufacturers

Dear Sir or Madame,

The Food Safety Authority of Ireland (FSAI) is the central authority responsible for the enforcement of all food legislation in Ireland. As competent authority for GM food in Ireland, the FSAI is charged with ensuring that only authorised GM foods and ingredients are on the Irish market and that general and specific labelling requirements are strictly adhered to.

In several surveys undertaken by the FSAI, authorised GM ingredients were found in some foods but they were below the labelling threshold, and so did not require specific GM labelling. However, some foods with “GM-free” or “no GM ingredients” type labels were found to contain low levels of GM ingredients. A food that contains any level of GM ingredient may not carry a label indicating that it contains no GM ingredients as it is clearly misleading to the consumer and therefore in breach of the general food labelling Directive (2000/13/EC).

The general food labelling Directive also prohibits the misleading of consumers through labelling that suggests “that the foodstuff possesses special characteristics when in fact all similar foodstuffs possess such characteristics” (Article 2). An example to demonstrate this is labelling milk as “GM free”. All milk is GM free since, as yet, there is no milk from GM cows available on the market. However, to label milk as GM free would suggest to the consumer that GM milk is available or that other milk they might purchase could be GM and, therefore, it is prohibited.

It is in this context we are communicating with you regarding a product that was purchased in a store in Ireland as part of a survey of GM free type food labels:

“ xxxxx ”

The following declaration was carried on the packaging:

#### **“No Genetically Modified Ingredients”**

In order to ascertain the context of this label and to determine if it is accurate we would be obliged if you would forward the following information to our offices in Dublin by **xxx**.

1. The reason your company feels this label is accurate and justifiable with respect to the general food labelling Directive.
2. The ingredient(s) in this product that could be derived from a GM source.
3. Any form of documentation from the supplier or test results that verify that the ingredient(s) is from a non-GM source.
4. A list of all other of your products carrying similar labels available on the Irish market.

We will be addressing these issues with retailers in Ireland once we have had discussions with the producers and suppliers involved. The ultimate objective of this work is to fulfil our commitment to consumers by ensuring that declarations such as the GM free are accurate and comply with legislation.

Yours faithfully,

## **FURTHER INFORMATION**

Further information on this survey can be obtained from:

Food Safety Information Centre,  
Food Safety Authority of Ireland,  
Abbey Court, Lower Abbey Street, Dublin 1

Tel: 1890 336677 Fax: (01) 817 1301

E-mail: [info@fsai.ie](mailto:info@fsai.ie). Website: [www.fsai.ie](http://www.fsai.ie)