

Genetically modified foods

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Although the United Kingdom left the European Union (EU) in 2021, certain pieces of legislation (known as 'retained EU law' and to be known as 'assimilated law' from 1 January 2024) continue to apply until such time as they are replaced by new UK legislation, revoked or permitted to expire. This means that you will still see references to EU regulations in our guidance.

To fully understand this guidance, it is important to note the difference between the United Kingdom and Great Britain:

- UK: England, Scotland, Wales and Northern Ireland
- GB: England, Scotland and Wales

This guidance is for England and Wales

A genetically modified organism (GMO) is one in which the genetic material has been altered in a way that

does not occur naturally by mating and/or combination. Food retailers and caterers have to be able to tell their customers which foods and ingredients, if any, contain genetically modified organisms.

The Genetically Modified Food (England) Regulations 2004 and the Genetically Modified Food (Wales) Regulations 2004 require products consisting of or containing GMOs to be labelled as such, and the requirements also apply to non-prepacked foods containing GMOs. Products consistently 100% free from GM material can be labelled as such, but its use is discouraged.

Information provided by catering establishments

Your supplier will pass information to you in writing on which foods contain GMOs. It is a legal requirement for food products consisting of or containing GMOs (soya, for example) to be accompanied by written documentation. Each person in the supply chain, up to the sale to the ultimate consumer, must retain copies of the written documentation for a minimum of five years.

You should display a notice, menu, ticket or label that can be easily read by customers (at the place where they choose the food) with whichever of the following statements is most appropriate to the particular food in question:

- 'Genetically modified'
- 'Produced from genetically modified [name of organism]' - for example, 'Bread produced from genetically modified maize'

Labelling of prepacked or loose food

For products consisting of or containing GMOs, anyone involved up to the point of delivery to the ultimate consumer must ensure that for:

- **prepacked food**, the words 'This product contains genetically modified organisms', or 'This product contains genetically modified [name of organism(s)]' appear on the label
- **non-prepacked food** offered to the final consumer, the words 'This product contains genetically modified organisms' or 'This product contains genetically modified [name of organism(s)]' appear on or near the display of the product

Food, flavourings and food additives with a list of ingredients

Where the food consists of more than one ingredient, the words 'Genetically modified' or 'Produced from genetically modified [name of the ingredient]', must appear in brackets immediately after the name of the ingredient concerned. For example, a biscuit containing soya flour derived from GM soya must be labelled 'Contains soya flour produced from genetically modified soya'.

Where ingredients are designated by a category, the designation must be completed by the words 'Contains genetically modified [name of organism]' or 'Contains [name of ingredient] produced from genetically modified [name of organism]' and must appear in the list of ingredients. For example, for vegetable oils containing rape seed oil produced from genetically modified rape, the reference 'Contains rape seed oil produced from genetically modified rape' must appear in the list of ingredients.

For both of these, the indications may appear in a footnote to the list of ingredients, provided that they are printed in a font of at least the same size as the list of ingredients. Where there is no list of ingredients, they must appear clearly on the labelling.

Food, flavourings and food additives without a list of ingredients

The words 'Genetically modified' or 'Produced from genetically modified [name of organism]' must appear on the labelling of the food. For example, 'A spirit containing caramel produced from genetically modified maize' or 'Genetically modified sweet maize.'

Non-prepacked food

Where the food is offered for sale to the ultimate consumer as non-prepacked or as prepacked in small containers, of which the largest surface has an area of less than 10 cm², the information must be permanently and visibly displayed either on the food display or immediately next to it, or on the packaging material, in sufficiently large print for it to be easily read. For example, 'Bread produced from genetically modified maize.'

Manner of marking or labelling

All labelling, including the additional labelling required for foods produced in whole or in part from genetically modified organisms, must comply with the general requirements prescribed by the Regulations.

All particulars must appear on one of the following:

- the packaging
- a label attached to the packaging
- a label that is clearly visible through the packaging
- commercial documents (where the sale is not to the final consumer)

They must also be:

- easy to understand
- clearly legible and indelible
- marked in a conspicuous place in such a way as to be clearly visible
- not in any way hidden, obscured or interrupted by any other written or pictorial matter

Obligation to declare information

All businesses that supply food direct to the public, from supermarkets to fish and chip shops, must inform the public if any of their products contain GM soya or maize. Public service and school canteens, hospitals, HM prisons, military catering establishments and similar premises are also required to declare the presence of genetically modified ingredients in the same way as commercial premises. This applies whether the food is sold or supplied free.

The law only requires action if foods you sell do contain GM ingredients. If this does apply, you may inform consumers by various means.

Exemptions for products containing ingredients produced from GMOs

The additional labelling requirements do not apply to the following:

- food that contains genetically modified material that is accidentally introduced or technically

unavoidable and does not exceed the threshold of 0.9% (applies to each individual ingredient)* constituents of an ingredient that have been temporarily separated during the manufacturing process and later reintroduced but not in excess of their original proportions

- additives whose presence in a given foodstuff is solely due to the fact that they were contained in one or more ingredients of that foodstuff, provided that they serve no technical function in the finished product
- additives that are used as processing aids
- substances used in the quantities strictly necessary as solvents or media for additives or flavouring
- substances that are not additives but are used in the same way and with the same purpose as processing aids and are still present in the finished product, even if in an altered form
- products such as meat, milk and eggs from animals fed on GM animal feed
- products produced with GM technology - for example, cheese produced from GM enzymes

[*For example, if a dish contains a sauce with soy flour in it, it is the soy flour that must contain less than 0.9% GM material, not the sauce or the dish. This applies only to GMOs that are permitted for use in GB or the EU. There is no permitted level for unauthorised GMOs.]

Traceability

For products consisting of or containing GMOs (such as soya), written documentation is required to be passed on throughout all stages of the supply chain. The documentation must state which of the food ingredients is produced from GMOs, or in the case of products for which no ingredients list exists, indicate that the food is produced from GMOs.

Each operator in the supply chain must retain copies of the written documentation for a minimum period of five years.

Authorisation of GM ingredients

In order to be used in food, GM ingredients must first be authorised for use.

GM ingredients to be used in food sold in GB must appear on the [GB list of authorised GMOs](#).

GM ingredients to be used in food sold in Northern Ireland or the EU must appear on the [EU register of authorised GMOs](#).

Common products that may be genetically modified

Genetically modified maize (corn) contains a toxin to prevent damage by the corn borer. This will make cobs more attractive and there is no restriction to prevent it being sold as a vegetable. Currently only Monsanto 810 Maize has commercial approval to be grown in Europe.

Genetically modified tomatoes have been developed for flavour as well as other properties.

Food business operators should carry out detailed checks on product and ingredient specifications to determine their GM status and whether GM labelling is required.

'GM-free' or 'Produced from non-GM material' claims

For products consistently 100% free from genetically modified material, such claims are currently permitted as long as they can be substantiated. However, as many products are exempt from current labelling requirements, as outlined above, it is advisable not to make such a statement.

Always remember that additives, flavourings and extraction solvents you use may have been produced from genetically modified organisms.

It is an offence to apply a false description to any food.

A tolerance of 0.9% is allowed for small quantities of GM contamination in non-GM foods, but only for products from sources that are said not to be genetically modified and have good control systems throughout the supply chain. This tolerance is only applicable to GM products that already have an EU approval. There is no threshold for any GM product that does not have an EU approval in place.

Additives that could be derived from GM crops

Additives that could be derived from GM crops include the following:

- E101 and 101a* riboflavin - a vitamin and colouring agent that can be made by GMOs
- E150* caramel - colouring from sugars, which may be from GM maize
- E153* carbon black - colouring from burnt vegetable matter
- E160d lycopene - a red dye from tomato extracts
- E322 lecithin - an emulsifier usually made from soya
- E415* xanthan gum - obtained from starch from maize

Others are E270, E306-9, E325-7, E460 (a) and (b), E462-6, E471-9 (b), E570-3, E620-5, E1404, E1410, E1412-4, E1420, E1422, E1440, E1442, and E1450. These functional additives include lactic acid compounds, thickeners and emulsifiers, anti-caking agents, and flavour enhancers. Further potential sources of genetically modified material are corn syrup, glucose syrup, dextrose, fructose, maltodextrin, starch and modified starch, flavourings, and processing aids such as enzymes, solvents and oils.

[*No residual DNA or protein could remain in these products, even if the source material was GM. However, consumers wishing to avoid GM foods due to environmental or ethical concerns would still wish to avoid these if derived from GM material. This is another concern regarding GM-free claims.]

Modified starch

The description 'modified starch' does not refer to genetic modification. Modified starch is starch that has been altered by physical or chemical treatment to give special properties of value in food processing.

Further information

The Food Standards Agency website has [guidance notes on GM labelling](#).

The [European Commission Joint Research Centre](#) website may also be of interest.

Trading Standards

For more information on the work of Trading Standards services - and the possible consequences of not abiding by the law - please see '[Trading Standards: powers, enforcement and penalties](#)'.

In this update

Links to authorisations regulations added.

Last reviewed / updated: November 2023

Key legislation

[Regulation \(EC\) No 1829/2003](#) on genetically modified food and feed

[Regulation \(EC\) No 1830/2003](#) concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms

[Genetically Modified Food \(England\) Regulations 2004](#)

[Genetically Modified Food \(Wales\) Regulations 2004](#)

[Genetically Modified Organisms \(Traceability and Labelling\) \(England\) Regulations 2004](#)

[Genetically Modified Organisms \(Traceability and Labelling\) \(Wales\) Regulations 2005](#)

[Regulation \(EU\) No 1169/2011](#) on the provision of food information to consumers

[Food Information Regulations 2014](#)

[Food Information \(Wales\) Regulations 2014](#)

[Genetically Modified Food and Feed \(Authorisations\) \(England\) Regulations 2022](#)

[Genetically Modified Food and Feed \(Authorisations\) \(Wales\) Regulations 2022](#)

[Genetically Modified Food and Feed \(Authorisations and Modifications of Authorisations\) \(England\) Regulations 2023](#)

[Genetically Modified Food and Feed \(Authorisations and Modifications of Authorisations\) \(Wales\) Regulations 2023](#)

Please note

This information is intended for guidance; only the courts can give an authoritative interpretation of the law.

The guide's 'Key legislation' links often only shows the original version of the legislation, although some amending legislation is linked to separately where it is directly related to the content of a guide. Information on changes to legislation can be found by following the above links and clicking on the 'More Resources' tab.

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