

Genetically Modified Foods - Commonly Asked Questions

What does genetically modified mean?

Genetically modified organisms (GMOs) are created by the transfer of genes from one organism to another, altering the DNA of the host organism, in a way that cannot be achieved by mating. One feature of this process is that GM crops can be made to be resistant to certain pesticides, insects and herbicides.

How many different types of GMOs are there?

Worldwide there are many different GMOs used in the production of food, but in the UK only the following are approved and legally permitted to be present:

- Monsanto's Roundup Ready Soya Beans
- Novartis maize (corn)
- Monsanto's maize (corn)
- AgrEvo France T25 maize (corn)
- Novartis Bt 11 maize (corn)

Who has to declare the presence of GMOs in their foods?

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.

Do I have to display a sign about GM foods?

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

Will fresh vegetables such as corn on the cob or tomatoes be genetically modified?

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

Why do some products made from GM Soya and Maize not have to declare this?

The labelling requirements contain a number of exemptions;

- Where neither protein nor DNA of the genetically modified food is present, the food or ingredient is to be considered 'equivalent' to that produced by conventional means and thus need no additional labelling. This exemption covers products such as maize and soya bean oils and other highly processed ingredients.
- Small packages (e.g. individual butter or sauce portions) and certain marked glass bottles.
- Foods produced prior to 1st September 1998 and currently in the supply chain.

Is it legal to say 'GM free' or 'produced from non GM material'?

If such claims can be substantiated then they are currently permitted. However, as many products are exempt from current labelling requirements, as outlined above, best advice is not to make such a statement.

A tolerance of 1% is allowed for small quantities of GM contamination in non GM foods but only for product from sources that are said not to be genetically modified and which have good control systems throughout the supply chain.

If claims that food is 'GM free' are found to be untrue then the penalty under the Food Safety Act is a fine which could be as much as £20,000.

Which additives could be derived from GM crops?

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

E101 & 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) & (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, another concern regarding GM free claims.

What is 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.

This leaflet is not an authoritative interpretation of the law and is intended only for guidance.