

GM in animal feed

Legal criteria that genetically modified (GM) feed products must meet to be marketed in the UK.

GMO feed authorisation

When handling genetically modified produce or produce from genetically modified sources for use in animal feed, you need to be aware of the assessment and authorisation process.

Before a genetically modified organism (GMO) food or feed product can be marketed in Great Britain (GB) it must be authorised under the EU retained law [on Genetically Modified Food and Feed](#).

You can find more information about the authorisation process and a list of authorised GMOs, in our [GMO authorisation guidance](#).

GM animal feed, which is very unlikely to contain viable GMOs, is digested by animals in the same way as conventional feed. Food from animals which are fed with authorised GM crops is considered to be as safe as food from animals fed on non-GM crops.

GM labelling in animal feed

Animal feed materials and compound feeds which contain GM or GM-derived material must be indicated on the feed label.

Labelling is not required for animal feed consignments containing unexpected or technically unavoidable traces of GM material – which contains less than 0.9% of approved GM varieties.

GM commodities

A larger number of GM plant lines which have not been authorised for use in GB have been approved for growing elsewhere in the world, this includes varieties of:

- cotton
- maize
- oilseed rape
- rice
- soya bean

The UK feed industry imports more than 70% of its maize, soya and rapeseed requirements each year. Significant quantities of maize, in the form of distillers' dried grains and corn gluten feed, are imported from the USA and much of this will be GM. The USA also supplies the UK with GM sugar beet.

The segregation of GM and non-GM crops after harvest, during transport, storage and subsequent use is not routinely practised by commodity-exporting countries, but can be achieved at a premium. The additional price paid will vary according to the state of the commodity markets and the nature of demand for the end products - this includes milk, meat and eggs for human consumption.

To deal with the possible presence of unauthorised varieties in imports of commodity crops for feed use, there is a measure in EU retained [Regulation 619/2011](#) which set a tolerance level of 0.1% for certain varieties for which a valid application for authorisation has been made.

Transfer of GM material from animal feed

There have been a number of studies that have considered the possibility that functional transgenes from GM derived feed materials might be incorporated into livestock products for human consumption, for example, milk, meat and eggs.

Biologically active genes and proteins are common constituents of food and feed, but digestion in both animals and humans is known to rapidly degrade their DNA. The subsequent uptake of DNA fragments from the intestinal tract into the body is a normal physiological process.

In 2007, EFSA advised that a large number of experimental studies with livestock have shown that recombinant DNA fragments, or proteins derived from GM plants, were not detected in tissues, fluids or edible products of farm animals – including broilers, cattle, pigs or quails. Broilers are chickens bred for meat production, and are not egg-laying hens.

It is possible that DNA fragments derived from GM plant materials may occasionally be detected in animal tissues, in the same way that DNA fragments derived from non-GM plant materials can be detected in these same tissues.

EFSA noted that no technique is currently available to enable a valid and reliable tracing of animal products including meat, milk and eggs when the producer animals have been fed a diet incorporating GM plants.

GM food and feed regulation guidance

PDF

[View GM food and feed regulation guidance as PDF\(Open in a new window\)](#) (987.33 KB)

Important

EU references in FSA guidance documents

The FSA is updating all EU references, to accurately reflect the law now in force, in all new or amended guidance published since the Transition Period ended at the end of 2020. In some circumstance it may not always be practicable for us to have all EU references updated at the point we publish new or amended guidance.

Other than in Northern Ireland, any references to EU Regulations in this guidance should be read as meaning retained EU law. You can access retained EU law via HM Government's [EU Exit Web Archive](#). This should be read alongside any EU Exit legislation that was made to ensure retained EU law operates correctly in a UK context. EU Exit legislation is on [legislation.gov.uk](#). In Northern Ireland, EU law will continue to apply in respect to the majority of food and feed hygiene and safety law, as listed in the [Northern Ireland Protocol](#), and retained EU law will not apply to Northern Ireland in these circumstances.