

GMO FOODS AND LABELLING

Genetically modified food, products and ingredients, are a contentious subject. Safety concerns persist amongst both consumers and some governments, despite extensive research and industry assurances, regarding the consumption of foodstuffs containing genetically modified organisms (GMOs).



The food industry has long battled with questions about the benefits and safety of GMO products. In the face of resistance from regulators, non-governmental organisations (NGOs) and consumers, GMO products have in recent years gained some acceptance in parts of the world, like USA, and are traded and sold with varying degrees of restriction. Like all other aspects of the food supply chain, GMO growers, producers and manufacturers are overseen by regulators and must meet strict quality and safety standards.

However, issues of trust arise. Assurances from the industry and even governments are not always sufficient. In part, this is because countries and regions allowing GMO production are, rightly or wrongly, perceived to have less robust oversight procedures than NGOs and consumers would like.

Another concern is choice. Consumers want to know what they are buying and to have the choice to buy and eat GMO products, or to avoid them. Labelling is the only mechanism that allows shoppers to identify whether or not a product contains any GMO and they base purchasing decisions on what they read.

GMO REGULATION

In Europe, the European Food Safety Authority (EFSA) has defined an application process to evaluate and verify the safety of a GMO.¹ In the United States, oversight of GMOs is conducted by a combination of government agencies, primarily the United States Department of Agriculture (USDA), US Food and Drug Administration (US FDA) and the US environmental Protection Agency (US EPA).

PCR TESTING

Testing for GMOs is performed with Polymerase Chain Reaction (PCR) based DNA technology that can determine the presence and/or the quantity of a specific GMO. DNA-based quantitative PCR testing utilises GMO strain standards to determine GMO levels from 0.01 per cent to 5 per cent. This can be conducted on seeds, ingredients and foods. As a result the determination of GMO in substances is possible in order to ensure proper labelling is possible.

LABELLING REQUIREMENTS

In Europe, labelling is required on all products that consist of GMO or contain GMO and products derived from GMO, but no longer containing GMO, if there is still DNA or protein resulting from the genetic modification present.⁴ To NGOs the major concern is the position taken by the US FDA, which is that the labelling of a GMO product is not required, providing there are no significant differences between the GMO derived and non-GMO foods.⁵ The US FDA does however state that any allergen or nutritional difference must be declared on the label or labelling. Otherwise, the labelling of GMO substances in the US is voluntary.

Including the European Union (EU), there are currently 64 countries that require the labelling of GMO products.⁶

US LABELLING EXCEPTIONS

On 19 June 2013, a NGO announced that the USDA Food Safety Inspection Service (FSIS) had approved a non-GMO label claim for meat and liquid egg products.⁷ Products that are allowed to make the claim must demonstrate that the animals' feed was free of genetically modified corn, soy, or other feed. The USDA FSIS allows companies to demonstrate on their labels that they

¹ EFSA - GMO Applications Help Desk

² FDA - Genetically Engineered Plants for Food & Feed

³ SGS - GMO Testing

⁴ European Commission - GM Food & Feed

⁵ FDA - Guidance for Industry: Voluntary Labelling Indicating Whether Foods Have or Have Not Been Developed Using Bioengineering

⁶ Labelling Around the World

⁷ Non-GMO Project Verified Label Receives Approval for Meat, Liquid Egg Products



are meeting third party organisation standards or claims, providing those claims are truthful, accurate and not misleading.⁸ The USDA and US FDA viewpoint has not changed. They stand by the evidence that approved bioengineered crops and feedstuffs are safe to consume and do not significantly differ from crops developed through traditional plant breeding and they therefore do not require different labelling.

Additionally, on 4 June 2013, the State of Connecticut passed Bill HB 6527⁹ that requires infant formula, or baby food, that is produced from GMOs to be labelled as “produced with genetic engineering”. This labelling is to start 1 July 2015 and the compliance enforcement date is 1 July 2019. This law becomes effective 1 October

2013, providing four additional states pass similar legislation, one of which must border Connecticut and the total population of those states exceeds 20 million people.¹⁰

On 12 June 2013, the State of Maine passed LD 718¹¹ that requires food and feed produced from GMOs to have a disclosure statement of “Produced with Genetic Engineering”. Disclosure is to take place within 18 months. The compliance enforcement date is 1 July 2019 and does not apply to foods with less than 0.9% GMOs, alcoholic beverages, restaurants, unintentionally commingled products and other conditions set forth in the law. The law will be repealed if a similar law is not adopted in at least five states, or states with a population or combined population of at least 20 million people.

While no immediate action is being taken at a federal level, 25 states are currently with legislation or ballot legislation.¹² Additionally, there is one US retailer that will require GMO labelling in their store by 2018.

LEGISLATIVE FUTURE

While it appears that there may be possible GMO labelling in the future in the US, it doesn't appear that this will be performed by federal law as once again the US congress voted down GMO labelling in May 2013.¹³

INTERNATIONAL SUPPORT

GMO testing and food nutritional labelling services from SGS can support the food industry and ensure national and international labelling requirements are met.

Jim Cook
Consumer Testing Services
Food Scientific and Regulatory Affairs
Manager

SGS North America, Inc.

james.cook@sgs.com

t +1 973 461 1493

⁸ Approval of Non GMO Meat Label is ‘Huge Win’ for Industry

⁹ HB 6527 - An Act Concerning Genetically-Engineered Food

¹⁰ RT - Connecticut Passes First GMO Food Labeling Law in US

¹¹ Maine Legislature - An Act To Protect Maine Food Consumers’ Right To Know about Genetically Engineered Food and Seed Stock

¹² Food Safety News - With Recent Victories, Movement to Label GMOs Gains Steam

¹³ GMO Labeling Bill Voted Down In Senate