KNOW MORE –
GENETICALLY MODIFIED FOOD

Safety & Labelling

食物安全中心
Centre for Food Safety

I. SAFETY OF GENETICALLY MODIFIED (GM) FOODS

1. Is GM food safe for human consumption?

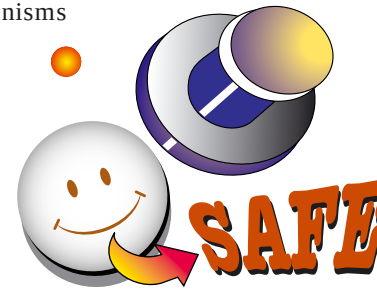
According to the World Health Organization(WHO), GM foods currently available on the international market have passed risk assessments and are not likely to present risks for human health. In addition, no effects on human health have been shown as a result of the consumption of such foods by the general population in the countries where they have been approved.

2. Have GM foods been assessed before they are available in the market? How?

Since the use of modern biotechnology in food is a recent development, as a safety measure, all GM foods are subjected to rigorous safety assessments by the industry and regulatory agencies of the places of origin before they are put into the market. For example, GM foods are regulated by two authorities in Canada: The Canadian Food Inspection Agency (CFIA) and Health Canada (HC). They are responsible for safety and environmental impact assessments of GM foods. Only when the conditions laid down by these two agencies are fully satisfied, will the GM foods be approved to release into the market. The assessments, including that performed by the manufacturers, may take several years to complete and are comprehensive.

The safety assessments are based on the principle of "substantial equivalence" which was endorsed by WHO/FAO and the Organisation for Economic Cooperation and Development (OECD). The concept of substantial equivalence is that if a new food or component is found to be substantially equivalent to an existing food or component, the food or component is considered to be as safe as its conventional counterpart. Key considerations include:

- Characteristics of the donor and host organisms
- Composition
- Dietary intake
- Nutritional data
- Toxicological data
- Allergenic properties



Where differences are identified, additional assessments and animal studies will be carried out. To date, none of the GM foods in the market have been proved as unfit for human consumption.

II. LABELLING OF GM FOODS

1. What are the approaches of GM food labelling?

The regulatory approaches on GM food labelling vary in different countries and areas, and can be broadly classified as voluntary or mandatory. For the voluntary labelling approach, only GM food that is significantly different from its conventional counterpart, in terms of composition, nutritional value and allergenicity, needs to be labelled. For the mandatory labelling approach, it can be further classified as two categories, i.e. "pan-labelling" or "labelling for designated products only". The "pan-labelling" category requires that any food products, which contain GM materials exceeding a threshold level or have any significantly different characteristics as a result of genetic modification, must be labelled. The "labelling for designated products only" category requires that only the designated products, which are genetically modified, need to be labelled.

2. What are the international practices on labelling of GM foods?

The international community is working towards a consensual policy on GM food labelling. However, the Codex Alimentarius Commission of the United Nations is unlikely to be able to set internationally agreed standards in the near future. At present, policies on GM food labelling vary in different countries and areas:

Canada and the United States

Labelling of GM food is only required when the food is significantly different from its conventional counterpart in terms of composition, nutrition and allergenicity. However, the trade may label other GM foods on a voluntary basis. In Canada, a set of guidelines for voluntary labelling of GM foods has been issued in April 2004. While, in the United States, public consultation on draft guidelines for voluntary labelling has been finished but finalisation of the guidelines is still pending.

Member countries from the European Union

All GM foods have had to be labelled in countries of the European Union since 1998. This policy was amended by the European Commission in November 2003. The new requirement stipulates that all foods produced from genetically modified organisms (GMOs) should be labelled, irrespective of whether DNA or protein of GM origin is detectable in the final product. Moreover, conventional foods with adventitious presence of GM materials of higher than 0.9% should also be labelled.

Australia and New Zealand

The Australia and New Zealand authorities decided that all food products produced or imported had to be labelled starting from December 2001 when any of their ingredients contains more than 1% GM materials. Additional labelling was also required for GM food ingredients with significantly altered characteristics. Highly refined foods, processing aids or food additives with the absence of GM materials, flavours in a concentration no more than 1g/kg in the final food, as well as foods prepared at point of sale are exempted from the GM food labelling requirement.

Japan

The Japanese authorities have required designated agricultural products and processed food items containing GM materials to be labelled. For the processed food items, those ingredients containing GM materials that are ranked within the top three constituents in terms of weight and the weight ratio of which account for five percent or more of the total weight have to be labelled. Labelling is not required for oil and sauce, where the original GM materials can no longer be detected.

Republic of Korea

The Korean authority require that all approved genetically modified agricultural products (including bean sprout originated from approved beans and other sprouts), which contain more than 3% GM materials have to be labelled. In addition, processed foods which contained these approved GM products as one of the top five ingredients were required to be labelled.

Mainland China

The Ministry of Agriculture enacted a regulation "Implementation Regulations on Labelling of Agricultural Genetically Modified Organisms"《農業轉基因生物標識管理辦法》(which was effective in March 2002). Under the regulation, five categories of GM crops, including soya bean, corn, cotton, rapeseed and tomato, as well as some of their products are required to be labelled. On the other hand, the Ministry of Health enacted a regulation, "Health Administration Regulation on Transgenic Food"《轉基因食品衛生管理辦法》on GM food in July 2002. This regulation stipulated that all GM food should be properly labelled.

Other places in Asia

Some other Asian countries and areas such as Taiwan, Thailand and the Philippines have also set up regulations on GM food labelling.

III. SITUATION IN HONG KONG

1. Is there any production of GM crops in Hong Kong?

Hong Kong does not have any commercial production of GM crops or livestock to date. However, biotechnological research studies are being conducted in universities. Local scientists have not yet conducted any field trials.

2. Is the Government aware of the availability of any GM foods in Hong Kong? Is there any control on GM foods currently?

Some food products on shelves are known to contain GM food ingredients. These materials are proven to be safe for human consumption by the trade and regulating agencies of their places of origin before they are available in the market.

Under Part V of the Public Health and Municipal Services Ordinance (Cap. 132), food intended for sale in Hong Kong must be fit for human consumption. The Ordinance applies to all foods including GM ones.

3. What is the future policy on GM foods in Hong Kong?

As a proactive measure to address the safety of future GM foods, the Government considers it appropriate to introduce a mandatory pre-market safety assessment to ensure the safety of GM food. The purpose is to ensure that only GM food that has passed the safety assessment can be sold in Hong Kong. On the other hand, in order to enhance consumers' knowledge and right to make an informed choice on GM food, the Government has issued a set of guidelines for labelling of GM food to facilitate the trade to provide truthful information on GM food.

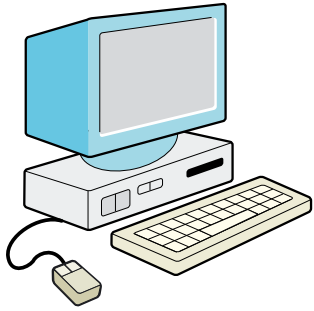
IV. FREQUENTLY ASKED QUESTIONS

1. Is it possible that GM crops currently available contain animal genes?

There is no GM crops currently on sale containing animal genes. To the best of our knowledge, these kinds of products are still in the research stage. These products will be subjected to stringent safety assessments by the industry and food authorities of their places of origin before they are available in the market.

2. What are the major concerns of green and consumer groups?

- The major concern of green groups is the possible environmental impact of GM crops.
- The major concern of consumer groups, as well as the concerns of some green groups, is consumers' "right to know" through labelling.



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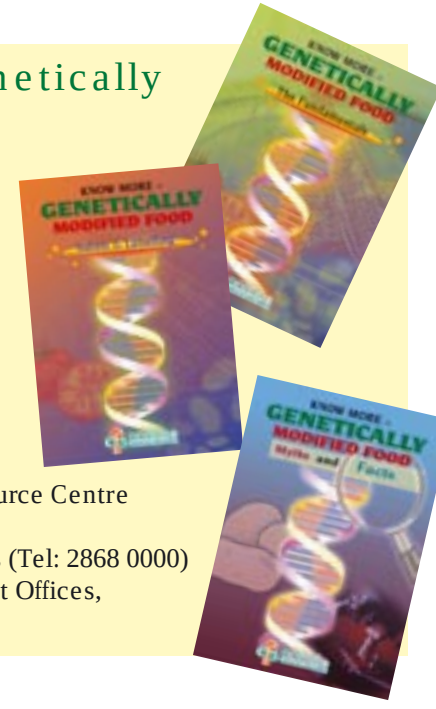

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食物環境衞生署
Food and Environmental Hygiene Department

Published by the Centre for Food Safety,
Food and Environmental Hygiene Department
Printed by the Government Logistics Department (07/07)