



Does your company trade in or otherwise use genetically modified organisms?

Rationale for question

Biotechnology and genetic engineering is a fast growing research and industrial sector with vast potential for new technology and products. The medicinal applications are extensive and include the development of treatments to cure intractable disease. It could also contribute to the development of new materials and processes for manufacturing industries. The current most contentious application, however, is the use of genetic modification (GM: see definition below) to develop new varieties of food crops. This question focuses on GM Organisms because this heavily debated topic is a concern to many consumers.

Selective breeding for certain traits over several generations within a population of plants or animals is an ancient form of genetic engineering. GM might be seen, therefore, as a faster way to achieve beneficial results. Proponents argue that GM crops will reduce the use of pesticides and herbicides, improve drought resistance, have lower production costs and obtain higher yields. As a result, they contend that GM crops have the potential to solve world food shortages. Proponents also maintain that some GM crops could provide health benefits, e.g. certain strains of modified rice contain vitamin A and iron.

Critics of GM for agricultural purposes cite intrinsic and extrinsic concerns. Intrinsic arguments include moral concerns about whether it is permissible to splice particular genes from different species. Extrinsic

arguments deal with health, environmental and social issues. With particular regards to food, critics contend that GMOs should not be used while there is a lack of scientific understanding about their impact on human health. Unpredictable gene expression, for example, could result in unanticipated toxic effects or allergies, decreased nutrients, drug resistance or even novel diseases. Critics also argue that genetically modified plants could disrupt delicate ecological balances as the new DNA might affect non-GM plants or animals, e.g. through bees collecting pollen and moving from GM plants to non-GM plants. Finally, there are ethical and food security concerns since a very small number of companies, which own patents on particular GM seeds, are able to determine the terms of use for the seeds. The GM seed is often deliberately infertile, for example, and cannot be harvested and kept for seeding the next year's crop. As a result, producers must purchase seed each year.

Though GM foodstuffs are traded globally, governments have differed in their responses to GM food. In Europe, where consumer response has been cautious, the European Union (EU) has introduced regulations concerning the testing and labelling of GM food. In the United States, by far the largest producer of GM crops, consumers appear more comfortable with GM food and US government requirements for the testing and labelling of GM food is less strict than in Europe. In the developing world, the impact of GMOs is potentially even greater and so the risks and opportunities are correspondingly higher. There is a lack of capacity in most such countries to regulate or monitor GMOs.

Defining terms

A 'Genetically Modified Organism' (GMO) is an organism whose genetic material has been altered using the genetic engineering techniques generally known as recombinant DNA technology i.e. techniques where DNA molecules from different sources are combined into one molecule to create a new gene. This modified DNA is then transferred into an organism causing the expression of modified or novel traits.

We do not define GMOs as organisms whose genetic makeup has been altered by conventional cross breeding or methods that predate the discovery of the recombinant DNA techniques.

Primary and Secondary answer requirements

ANSWERING YES

Companies must:

1. describe any practices and policies that guide their use of GMOs, providing hyperlinks if available; and
2. state how they label products that contain GMOs, if any.

Companies may:

1. state where policies and practices are published, providing hyperlinks if available.

ANSWERING NO

Companies may:

1. describe any relevant practices or policies;
2. describe how they implement and monitor their policies; and
3. state where these policies and practices are published, providing hyperlinks if available.

ANSWERING DON'T KNOW

Companies must:

1. demonstrate that they are making an effort to investigate whether they use any GMOs, e.g. through products in the supply chain.

Companies may:

1. provide any relevant information they have regarding the origin of their products;
2. explain why they have been unable to gather further information; and
3. describe their future intentions regarding this issue.

NOT APPLICABLE is not a permissible answer to this question.

NO ANSWER YET is only permissible under extraordinary circumstances and then for only a limited period.