

Genetically Modified Foods

David J. Claxton*

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1 Introduction

My views and opinions based on the article, “Scientists reopen debate over GM food”¹ by Jonathan Jeake, Science Editor, The Sunday Times, July 16 2008.

Genetically modified foods first hit the shelves in America in 1994 – a tomato genetically modified to be more resilient to rotting. Here, as in Asia and Australia, GM foods have been widely accepted ever since, with around 280bn acres of GM crops being grown in 2007.

So are GM foods a good thing?

2 The Benefits of Genetic Modification

There are a great many number of benefits of genetic modification. One of the biggest pro-GM arguments, is that GM foods are better for you than non-modified versions. Foodstuffs can be modified to have higher nutritional values, such as extra vitamins and minerals. Flour can even be made such that white bread can contain as much fibre as wholemeal bread.

Crops can also be modified to be disease and pest resistant. Some crops can even produce their own, natural insecticide, reducing the need for chemical insecticides. What is more, plants can be modified to be resilient to herbicides, so they are not affected by spraying to reduce weeds.

Crops modified to withstand drought conditions will be greatly beneficial in reducing world hunger, in places such as Africa.

GM crops can produce cleaner finished products. For instance, rape seed can be modified to produce the fish oils, which are greatly increasing in popularity. Not only is this beneficial to the depleting fish stocks, it is free from the contaminants of the sea. Note that also, these GM ‘fish oils’ are plant origin, and so are suitable for use by vegetarians and vegans.

Something quite astounding, is that research has shown that it may be possible to remove the allergens in products such as peanuts, which can produce very severe and fatal reactions to allergy sufferers.

With the world’s population expected to increase to a massive 9bn by 2040, genetic modification can ensure we are able to produce enough food to sustain everybody.

The plans in the pipeline for the new generation of GM foods is the first to be beneficial to the customer, though it’s increase nutritional content, rather than for the benefit of the farmer and seed producers’ pockets.

3 Criticisms of Genetic Modification

Most Europeans oppose the idea of genetic modification. Many are scared of the changes, perhaps not fully understanding them. The word “contamination” is often used when discussing genetic modification.

A beneficial modification made to one crop, can be disastrous to others. For instance, what would happen if the gene which prevents damage by herbicide to a crop, was spread to a weed? Would we end

*Web: www.davidclaxton.co.uk Email: admin@davidclaxton.co.uk

¹<http://www.timesonline.co.uk/tol/news/uk/science/article4276255.ece>

up producing super-weeds, tolerant to herbicides, thus making the original problem worse? Could we see far worse implications if the modified genes were to spread to other plants? Critics believe not enough research has been undertaken into this.

Some critics believe that we simply do not need GM foods. We all know that what we truly need to be healthy, is a mixed, balanced diet.

Finally, some critics believe the new advances in GM foods to purely be a marketing gimmick, to attempt to combat the negativity surround genetic modification in Europe.

4 Conclusion

It is difficult for me to say that I am completely pro or anti genetic modification. Whilst I greatly appreciate the benefits, one cannot help being cautious of the possible negative implications. Genetic modification is a relatively new concept, such that I do not feel ready yet to be sure it is completely safe.

If I were to choose, I would say the great many benefits of genetic modification, outweigh the possible (and not yet proven or disproven) negative implications. Perhaps, by a whisker, I would say I am pro-genetic modification.