

YOUNG EUROPEAN MUSLIM



From the Editorial Team . . .

Assalamu-Alaikum and Greetings!

Welcome to the ninth issue of the Young European Muslim Newsletter (YEM). We are a team of young people from the North of England whose ages range from 13 to 19. This newsletter is intended, not specifically for Young European Muslims, but for everyone throughout the world, whether Muslim or non-Muslim. We work together on a regular basis to design and produce quarterly newsletters on 'Muslim issues' such as Islamophobia and Islamic festivals. We constantly seek feedback from our readers concerning the contents of this newsletter - Were there any parts you particularly enjoyed? Can we make any improvements? Any form of feedback would be highly welcome.

This issue is based on the present and highly controversial subject of Genetically Modified Food. It is an issue which effects Muslims and non-Muslims alike.

What is GM Food?

When crops have been genetically modified they become known as GM crops.

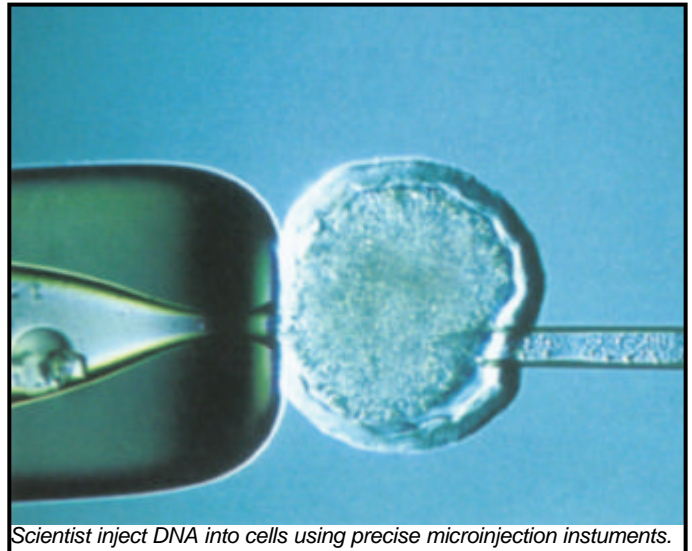
Scientists can now create plants that nature itself has never produced. These are plants that are resistant to chemicals that kill weeds (herbicides), plants that produce chemicals to kill insects (pesticides) and plants that last longer after harvesting. The methods used to produce these crops involve changing, or modifying, material within the crops, called genes. Genes are contained in the cells of all living things. They guide how living things are made and how they function.

The production of Genetically Modified food is causing a huge row. Its creators believe that GM Crops are the future of agriculture, and that they will be healthier and more productive than other crops. But many people believe the safety of these crops has never been properly tested, and that growing them may damage wildlife and the countryside. Health problems with other foods have left many people unwilling to accept what scientists claim. Some people say that creating GM food is playing around with things we do not fully understand and that scientists have gone too far.

These people believe that the totality of interactions in the environment is immense and changing constantly. It is naive of any human to believe that they can change the pattern of creation and know the overall effects of that

Issue 9 - May 2003 - Rabbi-al-Awwal - 1424 - Free change. For many it is the unknown that is the scariest part of manipulating life.

We may be able to apply science, which many look to as a "God" in itself, in order to measure limited numbers of environmental effects of genetically modifying crops. We look at changes in the environment; is there a reduction in the number of ladybirds or other insects? What happens to the ever decreasing number or variety of birds?



Scientist inject DNA into cells using precise microinjection instruments.

We can also look for any differences in the harvest. But, any experiment is done for only a limited period of time. How long should that period be? Would the results be valid for the same crop grown in slightly different conditions, in a slightly more humid climate, for instance? And at what point should we say that we now know enough to decide what we should do?

Scientific knowledge does, and always will have its use. However scientific evaluations have a tendency to look at fragments of information but do not always give us the full picture. Scientific experiments can give us certain facts. Our ability to understand the implications from those facts is dependent mostly, on our awareness.

Within this awareness is the possibility of discovering what we do not know. Science will never tell us every fact necessary to make any decision. There will always be an area of unknown. Our own awareness is where science stops, and wisdom can begin. It is this wisdom that enhances science and colours it with truth - that is what makes science worthwhile.

Facts of GM Foods

Here we examine some of the facts that concern many people on the potential effects that GM crops have on the environment.

We highlight two interesting experiments which according to The Islamic Foundation for Ecology & Environmental Sciences (IFEES), demonstrate how little we know about the long-term environmental implications of growing GM crops.

In one experiment, GM potato was fed to aphids. The aphids were then fed to ladybirds. Consequently, the ladybirds had a reduced lifespan. In fact their lifespan was reduced by up to a half and their fertility was also adversely affected.



In the second experiment, monarch caterpillars were fed on leaves dusted with GM corn pollen. The density of the pollen was set to virtually match that in a field. Within four days, almost half of the caterpillars died, and of those that did not, many grew to only half their normal size. There were no deaths amongst monarch caterpillars that ate leaves dusted with normal corn pollen, or no pollen at all. Already thousands of acres of farmland in the USA are used to grow this type of GM corn!

The results of the above experiments clearly indicate the harmful effects that GM crops are having on wildlife and the environment.

Logically we should be aware that other potentially harmful effects are also bound to be happening to all life forms in this environment, including human beings.

The first experiment illustrates the potential harm GM foods could create, indirectly, at a later stage in the food chain. Any species could suffer in this way, including our own. This is because much animal feed is GM, and this could contaminate all meat, dairy products and eggs from animals fed on a GM diet.

The second experiment suggests significant differences between the GM corn pollen and non-GM corn pollen. Also, nobody yet knows what effect GM pollen might have on the occurrence of allergies. The release of GM crops is clearly a careless experiment on our health and that of the environment

Herbicide Resistant Crops

Many GM crops have been engineered to be more resistant to chemicals such as herbicides and pesticides. "Monsanto's 'Roundup' Soya and Corn" is engineered to be more resistant to 'Roundup', a highly toxic herbicide. This allows the farmer to spray more herbicide onto the field without destroying the crop itself. This is meant to give better weed control. However, weeds are an important source of food for many insects.

By killing all weeds, this will therefore result in a reduced population of insects. This will also have a knock on effect on the population of birds, which feed on the insects. "Roundup" is also toxic to beneficial fungi in the soil, which play an important role in the recycling of nutrients. (Monsanto accounted, directly or indirectly, for 91% of all GM plants grown in 2002).

Biotechnology companies often claim that genetic engineering will help reduce chemical use in agriculture; for instance, they say that herbicide resistant crops will require fewer doses of spraying. It is interesting to note that many GM food companies were mostly chemical companies themselves, but are now focussing more heavily on sales of GM produce. Many environmental scientists would also question their claims that GM crops will reduce chemical use. In fact, biotechnology companies have successfully lobbied for approval of higher levels of chemical residues in our food. If they genuinely wanted food to be grown with fewer chemicals, then they would be encouraging more natural farming methods, such as organic. However, since this is not in their financial interest, it is unlikely that they will ever do so.

Pesticide Producing Crops

Another group of GM crops are those engineered to produce their own pesticide. "BT Corn" is one example of this, and was mentioned in one of the experiments described earlier. Although, the artificial pesticide within the plant 'should' prevent any need for additional pesticides, there are other factors to be considered. Since the pesticide-producing gene has been engineered into the plant, the pesticide will now be produced constantly in every cell of the plant (as well as in the pollen).

This will increase the likelihood that insects will become resistant to the pesticide, due to prolonged contact to it. In fact, there are reports that farmers are now spraying pesticide even on these GM crops, as a result of increased insect resistance to the chemical. Another issue that comes up here is: What is the effect of eating a 'food', which is producing an active pesticide in every one of its cells throughout its lifetime?

Cross-Pollination and Superweeds

Pollen from GM crops can travel many kilometres to cross-pollinate with related species and contaminate honey. GM Pollen has the power to manipulate the genes in our foods, but it cannot control the wind or the bees. At the moment there is no method of controlling the spread of GM pollution. The long-term nature of GM organisms is extremely worrying, and already plants from non-GM sites have been fertilized by GM pollen. Any adverse environmental effects are therefore already spreading,

and the planet is being treated like an open laboratory containing an uncontrollable experiment.

'Superweeds' can be produced as a result of cross-pollination. For instance, herbicide resistant GM crops can cross-pollinate with a wild species. This means that the wild species will now also have that herbicide resistant gene. Hence, it would become a much more aggressive weed, and would require the spraying of even greater amounts of toxic herbicide to keep it under control.



Americans Angered by European Curbs on GM

The looming clash between Europe and America over genetically modified crops and food moved closer on 02/07/03 when MEPs put two new obstacles in the way of the GM revolution. The European Parliament in Strasbourg voted to bring in tight rules on GM food labelling. They also introduced new measures to allow restrictions on the growth of GM crops to protect organic and conventional farms from contamination. The move delighted consumer groups and environmental campaigners but infuriated US trade officials.

There was no official reaction from Washington, but a senior official criticised the EU rules as "difficult and expensive for suppliers and confusing for consumers". He noted that the US had "already made its views known" on the subject. At the core of American anger is the fact that the rules might allow Europe to become a GM-free zone. This would be simply through consumers choosing not to buy GM products (which are nearly all American), and through safety rules that would make it almost impossible to grow GM crops.

American farmers claim the closed EU market costs them \$300m (£180m) a year in lost exports, mostly maize. GM crops are not labelled in America, where the public has not opposed them. A new Mori poll, released to The Independent on 02/07/03, shows that in Britain opposition to GM food remains firm, with just under half of the population (46%) opposed to it, and only one in seven (14%) in favour. The big British supermarkets all continue to keep GM products off their shelves, responding to what they see as the public mood.

The EU laws will mean that all products containing 0.9% or more of GM material will have to be labelled. The legislation also covers animal feed and so-called derivatives

such as oil. A lower threshold of 0.5% will be applied to products approved elsewhere in the world that have not yet passed all the EU tests. Meanwhile a new regime will trace products back to their source. Current EU requirements are that food containing any ingredient with at least 1% of genetically modified DNA should be labelled. Yesterday's changes won backing from across the political spectrum. Chris Davies, the Lib Dems. environment spokesman in the European Parliament, said "The customer knows best, and shoppers must have the information so that they can decide for themselves what products to buy. If this slows the development of GM products while more research is carried out that may be no bad thing."

GM Foods & World Hunger

Are GM foods the solution to world hunger? This is the big one. Supporters of GM foods know that if they can pull this one off, then the money will really start to roll in. Let's look at some of the issues involved in this topic of global importance. The argument put forward to support the proposal that genetic modification of food will help solve the world hunger problem is simple: Millions of people around the world are starving. By genetically modifying crops so that more food is produced, the problem of world hunger can be solved.

On the surface, the above argument may seem highly convincing. More food; less hunger. It certainly seems to sound true. And we all want starvation to be eliminated. So what's wrong with using gene technology to produce more food and solve the problem?

The argument that people are starving due to a global lack of food production is flawed. We have enough food to feed everyone on the planet. The reason why people go hungry is not because there is not enough food. It is because of barriers, whether they are political, economic, or any other, that prevent certain groups of people from being able to eat the food that is already there. Many people go hungry, for instance, simply because they do not have enough money to buy food. After all, people even go hungry in North America and in Europe where there is clearly enough food. The reasons for starvation will depend on the circumstances of the individual, i.e. no job and no income support etc. The distribution of food on the planet is also a major factor in relation to starvation. Take, for instance, the example of Ethiopia, where at the height of its famine, a significant quantity of food grown there was actually exported to the USA.

One must also question the intention of biotechnology companies. Are they really spending billions of pounds and dollars on developing and advertising GM crops in order to supply so much of it to people who can't afford it? Since when did they take up this charitable role? Or is each biotechnology company a business that wants to sell its product at the best price that will give them the maximum possible return for their investment?

Also, if solving world hunger was the aim of biotechnology companies, and already millions of people are eating GM products, then would one not expect that at least a few thousand people had already been saved from starvation? And if they haven't then why is that?

The reality is that the GM products are not being supplied to the starving. All that is essentially happening is that they are replacing the conventional foods that were already there to begin with; neither is there any reduction in price. So, if you couldn't afford or didn't have access to conventional food before, then it is extremely unlikely that you can afford or have access to GM food now.

The price and distribution of food has, on average, remained unchanged. So where exactly do GM foods end up? Much GM food actually ends up in processed foods such as biscuits, cakes, pizzas, crisps etc. Surely these aren't the sort of foods that we need more of in order to solve world hunger! Also a large proportion is fed to animals. With regards to world hunger, there are problems with combining large quantities of food into animal feed:

- A) It does little to help the millions of starving people in places like India who are actually vegetarian.
- B) It is an inefficient way to feed large numbers of people.

The closer one examines the proposal that GM companies are aiming to eradicate world hunger, the more apparent it becomes that they are not. Regarding food quantity, one must even question the assumption that genetic modification is the way to increase yields. A 1999 report from the United States Department of Agriculture (USDA), after examining crops grown in a number of different areas, refuted the claim that genetic modification results in greater yields of crop.....so it seems, that genetic modification may not even help us to grow more food in the first place!

It doesn't even end there. One very sinister aspect of the technology which has been, and apparently still is being researched, is what is known as the 'Terminator Technology'. By inserting a set of 'Terminator genes' into the DNA of a crop, the seeds of the following generation would be dead. The farmer would therefore have no viable seed to plant for the following year.

In many countries the saving of seed for the following year is common and allows the farmer to be more self-sufficient. The Terminator technology, if applied would ensure that this will not happen. The only way the farmer could sow any more seed would be by buying them.....and then, only if they can afford it.

Whenever one examines the deeper issues related to GM food it repeatedly becomes clear that the technology is driven purely for commercial gain. Food is being seen as nothing other than a lifeless commodity. The real problem of world hunger is used as a PR gimmick to facilitate the acceptance of this technology, which is then used for a completely different and selfish purpose.



The global monopolisation of food by multinationals is occurring at an alarming rate. Already only a handful of companies own almost half of the world's seed market. Seed distributors are being taken over by big biotechnology companies. Soon farmers will have no choice, and, therefore, neither will we.

GM food is an attempt to control the world food market at the expense of the global environment and the needs and desires of most of the world's population.

World hunger is the real issue, there is no denying that. However it is becoming very clear that it will not be eradicated by GM food. An over dependence on technologies, to solve problems arising from social, political and economic roots, will encourage the growth of further imbalances and instability as a result of these fundamental issues being left unaddressed. What is needed is the turning of our attention to more basic problems, so that we can see what is there. As we unravel these problems, more holistic strategies will need to be implemented to help solve them; strategies which will produce ripples of side-benefits, and not side effects.

Conclusion

It is clear that the interactions found in nature can be both extremely beautiful and complex. The genetic engineering of foods is an attempt to control something that we do not fully understand. We can control some of the results, but these are intimately connected to many other areas, that will always lead to unpredictable knock on effects elsewhere. Unfortunately, it may take years for us to become aware of some of these adverse effects, and by then it may be too late.

The application of technologies should never be used in a selfish way. We must respect the reality that we share our planet with so many other life forms. We must respect relationships between life and the dynamic and delicate balance that exists in creation. The Qur'an reminds us not to be so arrogant and egocentric, to appreciate that we are but a tiny part of the whole, Sura Rahman (55:3-11).

A final word from the Editorial Team

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