

CORE Food Fact: *Genetically Engineered (GE) Foods*

“Right now a debate is raging in the United States about Genetically Engineered (GE) ingredients in our food. The biotech industry claims that GE food crops will save the environment and solve the hunger crisis. But a growing number of scientists, doctors and consumers consider them a threat to the planet, and organizations like Christian Aid and the Institute for Food and Development Policy say GE food crops are likely to increase world hunger.”

____ The Center for Food Safety (www.truefoodnow.org)

There are several websites with useful information about GMOs (Genetically Modified Organisms) and the concern for their safety in food. We've chosen the site of a Texas-based organization *Say No To GMOs!* (<http://www.saynotogmos.org/ud2006/usept06.php>), to bring you answers to a few of the basic questions folks have about GE foods. They credit UK campaigner and lecturer Luke Anderson, geneticist Dr Michael Antoniou, and Prof Joe Cummins, Professor Emeritus of Genetics at the University of Western Ontario, for the following information:

Q: What are genes?

A: Genes are the inherited blueprints for the thousands of proteins that form the building blocks of all life, from bacteria to humans. Proteins make enzymes, which carry out all the bodily processes, like digestion of food, that keep us alive.

Q: What is genetic engineering?

A: Genetic engineering involves taking genes from one species and inserting them into another. For example, genes from an arctic flounder which has "antifreeze" properties may be spliced into a tomato to prevent frost damage.

Q: Is genetic engineering precise?

A: No. It is impossible to guide the insertion of the new gene. This can lead to unpredictable effects. Also, genes do not work in isolation but in highly complex relationships which are not understood. Any change to the DNA at any point will affect it throughout its length in ways scientists cannot predict. The claim by some that they can is both arrogant and untrue.

Q: Isn't GM just an extension of traditional breeding practices?

A: No - GM bears no resemblance to traditional breeding techniques. The government's own Genetic Modification (Contained Use) Regulations admit this when it defines GM as "the altering of the genetic material in that organism in a way that does not occur naturally by mating or natural recombination or both".

Traditional breeding techniques operate within established natural boundaries which allow reproduction to take place only between closely related forms. Thus tomatoes can cross-pollinate with other tomatoes but not soya beans; cows can mate only with cows and not sheep. These genes in their natural groupings have been finely tuned to work harmoniously together

by millions of years of evolution. Genetic engineering crosses genes between unrelated species which would never cross-breed in nature.

Q: Could this be dangerous?

A: Potentially, yes. In one case, soya bean engineered with a gene from a brazil nut gave rise to allergic reactions in people sensitive to the nuts. Most genes being introduced into GM plants have never been part of the food supply so we can't know if they are likely to be allergenic.

More seriously, in 1989 there was an outbreak of a new disease in the US, contracted by over 5,000 people and traced back to a batch of L-tryptophan food supplement produced with GM bacteria. Even though it contained less than 0.1 per cent of a highly toxic compound, 37 people died and 1,500 were left with permanent disabilities. More may have died, but the American Centre for Disease Control stopped counting in 1991.

The US government declared that it was not GM that was at fault but a failure in the purification process. However, the company concerned, Showa Denko, admitted that the low-level purification process had been used without ill effect in non-GM batches. Scientists at Showa Denko blame the GM process for producing traces of a potent new toxin. This new toxin had never been found in non-GM versions of the product.

Save the date: Saturday, January 30, 2010, 7 pm, May Room of the American Bank of Texas, 120 W. Sam Rayburn Drive, Bonham, TX. CORE (Citizens Organizing for Resources & Environment) will be hosting a Films & Forums Meeting, showing the revolutionary documentary, *Food, Inc.*