

Genetic engineering
will solve the third
world's food problem



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To ask if Genetic Engineering will solve the third world food problem, we must look at the causes first. It is easy to presume that the food problem is due to a shortage of food. However, it is not necessarily the case. Raj Patel, a policy analyst for ' Food First' [i], believes that agricultural dumping, land insecurity, slashed welfare entitlements and poverty are the main factors as to why people in the Third World go hungry.

To answer how GM products may overcome these problems, we must analyse what has been done so far and look at examples that may lead to one side of the argument or the other. The whole aim of Genetic Engineering is to produce better food and crops; crops that are more able to cope with conditions, disease or pests, produce larger fruit and are more reliable to use. As Snustad and Simmons [ii] state, the modern tomato has benefited tremendously from GE. Every variety of Tomato plant has its benefits - some are bushier, whereas some are more compact. GE has allowed these characteristics to be cross-bred to produce tomato plants that grow to a shape and size that keeps the fruit off the ground, for example.

Certain wild tomato's have genes that are resilient to various pathogens, such as fungi. These genes have been bred into modern varieties of tomato to make them more enduring. The tomato is just an example of what GE is capable of. This can be applied to any crop or fruit grown on a widespread scale. Naturally, if crops can be made to produce a larger yield or become ' undesirable' to pests (parasites can also be engineered to ' dislike' the crop!) then that is of benefit. More nutrients can be added to crops to produce a healthier diet for third world consumers - eg.

Algae contain a high amount of protein, and crops can be genetically modified using the algae genes to include higher level of protein. Also, the seeds of the crop can be engineered to repel insects and birds, so that the crop has a longer lifespan - obviously of value to a poorer farmer. We can clearly see that GE does have its benefits. People in the third world would gain from using GM products and that it would go some way towards solving, or at least helping, the third world food problems. There are further issues however that promote a different opinion; that state that GE will not help to overcome the third world food problem.

A group of 310 Scientists, in the area of genetics, from 36 UK counties have recently signed a World Scientist Statement to declare that a stop should be put to all work on GMOs immediately [iii] as not enough research has been carried out into GE. It is a belief that GMOs are unsafe to consume, in the extreme, or that contamination is likely to occur and a corruption of ' wild' animal and plant genes will occur - which could have serious, and as yet unknown, consequences. If this is the case, then widespread contamination could lead to affecting the gene pool (as seen with the pesticide DDT when pests built up resilience to it). GE is very expensive: it requires money for equipment, training (which needs to be integrated with the education of people about GE) and agencies to monitor the food for consumers well-being. So by the time it comes to selling the crop to farmers in the third world, it is often too expensive for them to buy. Or if not, then the special equipment that may be needed to grow the GM crops will probably be so.

Third world farmers may not be able to afford very expensive equipment and have to make do with crude implements. And this brings us back around to <https://assignbuster.com/genetic-engineering-will-solve-the-third-worlds-food-problem/>

poverty again. Nobel-prize winning economist Amartya Sen, backed by very thorough research, argues that in nearly every major famine, food has always been available. As stated in the introduction to this piece of writing, the third world food problem is not due to food shortage, it is simply that people are too poor to afford it. If we look at records from India, the world's third-largest food producer, this idea can be proven. In 2001 starvation deaths were reported in 13 states while the storage facilities of the FCI were full of grain [iv].

80 million tons of rotting, rat infested food lay in warehouses in India whilst many starved. This shows that there is certainly not a lack of food in areas where there is famine. In 2002 there was a proposal to dump the surplus food in the sea, in order to make space in the warehouses for the next crop of unsold food. This leads me to believe, whether GM products are approved through further investigations worldwide or not, that Genetic Engineering will not solve the third world food problem. The food is already there. It is not a case of increasing yield to feed the starving or change the genetics of a crop, so that it is more successful in its environment, in order to allow the odd farmer here and there to make more money from a better crop.

George W. Bush appears to believe that this is the way forward and feels that by investing in GE he can solve world famine - " European governments should join - not hinder - the great cause of ending hunger in Africa". Last year, Zambia caused an international diplomatic incident by refusing food aid from America as it was GE, and goes against their law and Catholic religion. A USAID official responded with " beggars can't be choosers" [v], which I feel sums up the American attitude to GE.

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There certainly haven't been enough tests carried out, and Bush's administration wants to rush things - it may not be ready for the American market, but they may as well give it a go in Africa. So even if GM crops are proven to be safe by scientists I don't see how it will help to solve the third world's food problem. The pope, as a rule, is very stubborn and it is improbable that he'll change his mind any time soon, and therefore many African governments are likely to continue to refuse aid in the form of GM products. But even if they do accept, so what? I refer back to my original comment of poverty being the main cause of the third world food problem.

In which case GE doesn't come into the equation at all. The food is already there, but people are starving because they can't afford to buy it. I believe that the issue needs to be looked upon from a different perspective.