DOWNLOAD PDF GENETICALLY MODIFIED FOOD WILL IMPROVE HUMAN HEALTH GREGORY CONKO, C.S. PRAKASH

Chapter 1 : Humanity's future | Search Results | IUCAT

Presents a collection of essays exploring varying viewpoints on the future of human life, discussing such topics as the role of technology, the energy crisis, global warming, overpopulation, threats to world health, and nuclear weapons.

Prakash May 13, After months of anticipation, the U. The move will undoubtedly be ridiculed as a cynical attempt by Americans to force GM products down the throats of skeptical Europeans. Yet, while the U. The biggest beneficiaries are sure to be resource-poor farmers in less developed countries. By now, many readers will be familiar with the story of Zambian President Levy Mwanawasa who, last autumn, rejected some 23, metric tons of food aid in the midst of a two-year-long drought that threatened the lives of over two million Zambians. If even a little of the food aid were diverted to seed stock, it could threaten the exportability of the entire Zambian maize crop for many years to come. Zambia is not unique. European GM restrictions have had other, similar, consequences throughout the developing world. Thai government officials have been warned by European importers not to authorize any GM rice varieties. Uganda has stopped research on GM bananas and postponed their introduction indefinitely. Argentina has limited its approvals to two GM crop varieties that are already permitted in European markets. Even China, which has spent hundreds of millions of euros funding advanced biotechnology research, has refused to authorize any new GM food crops since the moratorium began. Critics often deride GM crops with built-in pest, weed, and disease resistance as helpful only for wealthy farmers in industrialized nations, but developing countries could benefit tremendously from the adoption of GM crops. But many of the same GM crops available in North America are already helping poor farmers in South Africa, India, China, and the Philippines combat often-voracious insects while reducing the amount of insecticides or eliminating them altogether. Indeed, studies of South African and Chinese cotton growers suggest that small farmers actually achieve disproportionately higher benefits from GM relative to larger competitors, because expensive machinery can at times be made obsolete. A review of 81 separate research projects conducted over 15 years and funded exclusively by the EU found that GM crops and foods are just as safe for the environment and for human consumption as conventional crops, and in some cases are even safer because the genetic changes in the plants are much more precise. Dozens of scientific organizations, including the U. And in December, the French Academies of Medicine and Science added their names to that growing list and called for an end to the moratorium. Some will claim that the EU is already set to end the moratorium just as soon as its new approval regulations and labeling and traceability rules are implemented by member nations. First, several EU members have already missed the first deadline for implementing the new GM rules, and debates still rage over the coexistence of GM, conventional, and organic crops. How close are they really to ending the moratorium? Second, even if implementation is ultimately completed, what is to prevent individual members from ignoring the EU-wide rules? Third, the new GM labeling and traceability rules are hardly an improvement on the current situation. Industrialized countries like the United States, Canada, and Australia may be able to comply. But for poor developing countries, the added cost and complexity of the labeling and traceability rules would only replace a de jure ban with a de facto one, shutting them out of the GM revolution for good. Nor are they needed, since voluntarily labeled non-GM foods can be found in almost every shop in Western Europe, giving consumers choice. Interestingly, studies of consumer behavior show that, where labeled GM foods and labeled non-GM foods are available, even most European consumers seem to be indifferent to the "genetic status" of the goods they purchase. And the fact that less developed countries are most likely to benefit is why the United States should file it. Prakash is professor of plant genetics at Tuskegee University in Alabama. The authors are also co-founders of the nonprofit AgBioWorld Foundation.

Chapter 2 : Plant University resume in India - January

Genetically modified food will improve human health / Gregory Conko, C.S. Prakash How will the human impact on the environment affect humanity's future? Global warming is a serious threat to humanity's future / Mark Lynas.

English US Introduction The issue of world starvation is real in this millennium. So many people are facing starvation. The Food and Agriculture Organization FAO puts the figure to about one billion of the people facing starvation in The statistics for hunger are troubling with about 18, children dying everyday of hunger related issues FAO 1. In , about 1. The World Bank estimated that food prices would shoot up in and following the recent global down turn the prices have escalated pushing more people into poverty and thus hunger. The challenge of hunger or food insecurity is enormous in areas within low incomes areas. Finding a solution to world starvation is not an easy one because the number of undernourished people is very high. Scientists and policy makers have been working in the area of food technology to help overcome with the problem of world hunger. In , the number of undernourished people declined due to a slight improved economy especially in the developing nations. Moreover, food prices have fallen from the high prices experienced in FAO puts the undernourished at million this year compared to 1. FAO Most of the gains were made in Asia where there were 80 million less hungry. In sub-Saharan Africa the number reduced by 12 million. Nonetheless, the number of the hungry is still very high due to the current world economic situation, poverty, famine and conflict and a solution is needed to improve food security in the world and more so in areas with chronic food crises. Food technology Developments in food technology have enabled many people to access food. The life span of human beings has also increased in many parts of the world because the people have food that has improved their life quality. The developing nations have not been left behind and life span has risen in the recent decades. The advancement made in food technology has helped to feed the high world population due to high grain production. Scientists working in the food and technology field have come up with various ways of increasing food production. New ways of feeding the world population have been developed such as genetic engineering and biotechnology Prakash and Conko 1. These methods are aimed at improving food security. Genetically modified foods Genetically modified foods have been introduced in a bid to curb world starvation. Through genetic modification, foods and animals are modified through the manipulation of genes to yields the best possible yields according to the needs of human beings. Moreover, crops can be modified to make them more resistant to pests and thus protect them to ensure good yields. Agricultural technologies in developed countries Farmers in the countries that have embraced food technology and in particular genetically modified foods are now able to produce double of the grains they were producing in the same size of land. The genetically modified foods ensure good produce and mature faster than the conventional crops. Countries especially the developed ones have embraced genetically modified crops and for example in the United Kingdom genetically modified crops such as soya, maize, tomatoes and cheese have been approved Jones 1. The United States has approved a wheat has also embraced genetically engineered food and currently the debate on the approval of genetically modified salmon is ongoing. However, not everyone has embraced genetically modified foods due to healthy and safety concerns. Some people have fears about the safety of genetically modified foods because some are said to be harmful. Thus, people have to be educated about the use of genetically modified foods to array the fears they have and to use them to supply their nutritional needs. Many health and scientific organizations have endorsed biotechnology for example, the American Medical Association and the United Kingdom Royal Society. Agriculture technologies in Africa Agricultural technologies have helped to improve food security for many countries. Thus, efforts are being made to encourage African countries embrace agricultural technologies. There is need for African nations to embrace food technology because most of the poor people live in rural areas in the developing countries. Africa cannot afford to ignore agricultural technologies to improve its food production to feed its high population. The continent is a major importer of grains and its grain production has remained at the same level

for over four decades McPherson 5. The African leaders have taken a step towards reversing this trend. The first step they have taken is to pledge to increase the budget allocated to agriculture. The increased budget will help the farmers in the rural area produce adequate food for their consumption. The money allocated in the budget will go a long way in aid research to come up with food varieties that are suitable for the African climate. Use of synthetic pesticides and fertilizers Fertilizer and pesticide use is crucial in agriculture. The cost of fertilizer is high and many African governments have taken a step in making fertilizers available to the farmers through subsidies. Other steps have been by working in conjunction with banks to provide farmers with loans to secure fertilizers for instance the Equity Bank in Kenya. Malawi is a success story in adapting food technologies to improve its food production, which has made it a breadbasket for South African region. Green revolution in the Caribbean and Latin America The green revolution in Latin American and Caribbean has led to increased food production. The region has failed to produce adequate food to feed its population due to desertification, floods, soil erosion among other factors. Therefore, it is important for the region to embrace food technologies that will help the region to feed its population. The region has applied agricultural technologies more vigorously because earlier on only a few applications food technologies were utilized. The region has realized that it cannot continue to depend on the success of the green revolution to provide food because the method cannot bring in the success required to feed the whole region. Biotechnology methods must be adapted to reduce the dependence on imports for the provision of basic grain needs for the population. The program will help the region to improve and develop their biotechnology because in the past the kind of agricultural technologies applied have not been successful because they failed to address the unique needs of the region Izquierdo and De la Riva 1. Conclusion Food technology is important if the world is to overcome the current starvation problem. The technology will help to solve the problem of crop pest infestation and increase crop yields. The methods applied in biotechnology will help to come up with crops that can withstand the current environmental conditions such as drought resistant crops. So far, many people have benefited from genetically modified crops grown across sixteen nations in the world. Many farmers in the developed countries have benefited from the agricultural technologies in the less developed countries. The adaption of food technology in the developing countries shows that these technologies can be transferred and used in countries that are less industrialized just like in the developed countries Prakash and Conko 1. Using agricultural technologies will enable the countries in many parts of the world to gain food security. A world with adequate food will give the people an opportunity to live full quality lives and improve their economic status. As long as people have adequate food supply they will be in a position to produce grains to ensure that, all year round they have food because hungry people cannot be in a position to produce food. Having adequate food to feed the undernourished and the people facing starvation will help to reduce the number of deaths that occur daily while a few millions are overfed. Works Cited Dugger, Celia. New York Times, 2 Dec. Food and Agriculture Organization. Addressing food insecurity in protracted crises. Izquierdo, Juan and De la Riva, Gustavo. The global food crisis: Prakash, Sikh and Gregory Conko.

Chapter 3 : Can GM Crops Play a Role in Developing Countries?

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Recent Publications by C. Prakash on agricultural biotechnology Book Chapters C. McGraw Hill, C. Ismail Serageldin and Gabriell Perseley. Bibliotheca Alexandrina, Egypt http: Business Weekly April Diversity important in scientific research, Montgomery Advertiser. May 11, http: Dec 14, http: The potential and the challenge" Issue 2 http: Prakash and Gregory Conko, "Biotecnologia e Agricoltura: Gregory Conko and C. Prakash and Gregory Conko. Betterhumans, Monday, October 06, http: AgBioWorld Foundation, October Andrew Apel and C. Planting the Seeds of Business Growth in Florida. Florida Property Tax Appeals. An Electronic Journal of the U. Department of State, Vol. Prakash The Dead Hand. TechCentral Station,November 11, http: Prakash Why Agricultural Biotechnology for Africa? Prakash A Gene Revolution. November 07, C. Prakash Genetically modified crop debate in the context of agricultural evolution. Plant Physiology ; Prakash Cooperation Can Stop Starvation. Successful Farming January The Answer to Global Food Security. Prakash Hungry for Biotech. Prakash Sound science and foods from biotechnology with Christine Bruhn. San Diego Union Tribune. June 14, C. Institute of Public Affairs Reviews Australia. Prakash Trust emotions or facts on biotechnology? May 17, C. Prakash Biotech Oversight Checkpoints. May 1, C. ISB News Report http: Prakash Greens Means Genes. The Telegraph Calcutta, India. Prakash Some tough questions for biotech opponents. Telegram and Gazette Worcester, MA. March 24, C. Prakash Gene Revolution and Food Security. Observer of Business and Politics Delhi, India. March 2, C. Prakash Can India Benefit from Biotechnology? Prakash Feeding a World of Six Billion. The Statesman Calcutta, India. July 5, C. Prakash Biotechnology and Agricultural Research. The Hindu Chennai, India. June 10, C. May 31, C. Need to Foster Responsible Debate and Dialogue. The Hindu Bangalore, India. May 6, Letters to the Editor: Altered Food, Passion All Around. The New York Times. Good Enough to Eat. Anti-Biotech Luddites Sow Fear. Many of my interviews are posted at http: NPR Talk of the Nation: Genetically Engineered Organisms March 5, June 23, -- 9: Prakash has delivered more than one hundred public lectures in the past three years on the issue of agricultural biotechnology at nearly two dozen countries. This includes an invited presentation at the United Nations committee on sustainable development, testimony for the U. Congressional Committee on Science, testimony for the Philippine Senate Committee on Health, lecture at a seminar during WTO meeting in Seattle, televised debate with activists opposed to biotechnology for London Weekend Television, televised debate with Dr. Swaminathan Foundation He was also invited to speak at the annual meetings of three scientific societies: He also met with the Pontifical Academy of Science at the Vatican to discuss bioethical issues in agriculture.

Chapter 4 : Agricultural Biotechnology

The paper argues against Prakash and Conko's belief in "Technology Will Save Billions from Starvation" that the technology of genetically modified foods and the attendant agricultural practices is an ecological boon and a nutritional miracle.

Prakash December 13, In , while more than 14 million people in six drought-stricken southern African countries faced the risk of starvation, efforts by the U. Food aid, containing kernels of bioengineered corn from the United States, was initially rejected by all six governments, even though the very same corn has been consumed daily by hundreds of millions in North and South America and has been distributed by the World Food Programme throughout Africa since Four of those governments later accepted the grain on condition that it be milled to prevent planting, but Zimbabwe and Zambia continue to refuse to this day, and recently Angola also joined this group. Zambian President Levy Mwanawasa said his people would rather starve than eat bioengineered food, which he described as "poison. One news report after another described scenes of hungry Zambians rioting and overpowering armed guards trying to release tens of thousands of tons of the corn locked away in warehouses by the government. This is one of the tragic consequences of global fearmongering about recombinant DNA technology and bioengineered crops. Although many varieties that are of use to resource-poor farmers in less developed countries are at very early stages of the development process, even ones that have already been commercialized in such countries as Canada and the United States are being kept from farmers by governments skeptical of "genetic modification". And though critics of recombinant DNA believe it is unique, there have always been Cassandras to claim that the latest technology was unnatural, different from its predecessors, and inherently dangerous. As early as , Luther Burbank the noted plant breeder said that, "We have recently advanced our knowledge of genetics to the point where we can manipulate life in a way never intended by nature. We must proceed with the utmost caution in the application of this new found knowledge," a quip that one might just as easily hear today regarding recombinant DNA modification. It is not genetic modification per se that generates risk. Recombinant DNA-modified, conventionally modified, and unmodified plants could all prove to be invasive, harm biodiversity, or be harmful to eat. It is not the technique used to modify organisms that makes them risky. Rather risk arises from the characteristics of individual organisms, as well as how and where they are used. That is why the use of bioengineering technology for the development of improved plant varieties has been endorsed by dozens of scientific bodies. Moreover, bioengineered crop plants may be of even greater value in less developed countries than in industrialized ones. Despite commitments by industrialized countries to increase international aid, Africa still is expected to have over million undernourished citizens in , according to a report published this year by the UN Millennium Project Task Force. Although bioengineered crops alone will not eliminate hunger, they can provide a useful tool for addressing the many agricultural problems in Africa, Asia, Latin America, and other poor tropical regions. Indeed, recombinant DNA-modified crops have already increased crop yields and food production, and reduced the use of synthetic chemical pesticides in both industrialized and less developed countries. These advances are critical in a world where natural resources are finite and where hundreds of millions of people suffer from hunger and malnutrition. Critics dismiss such claims as nothing more than corporate public relations puffery. However, while it is true that most commercially available bioengineered plants were designed for farmers in the industrialized world, the increasing adoption of biotech varieties by underdeveloped countries over the past few years demonstrates their broader applicability. Globally, bioengineered varieties are now grown on more than million acres Nearly one-quarter of that acreage is farmed by some 6 million resource-poor farmers in less developed countries. Because they see many of the same benefits that farmers in industrialized nations do. As much as 40 percent of crop productivity in Africa and Asia and about 20 percent in the industrialized countries of North America and Europe is lost to these biotic stresses, despite the use of large amounts of insecticides, herbicides,

and other agricultural chemicals. Poor tropical farmers may face different pest species than their industrial country counterparts, but both must constantly battle against these threats to their productivity. It was discovered in that Indian farmers were planting seed obtained illegally from field trials of a biotech cotton variety then still under governmental review. Farmers in Brazil and Paraguay looked across the border and saw how well their Argentine neighbors were doing with transgenic soybean varieties and smuggling of bioengineered seed became rampant. When the Indian government finally approved bioengineered cotton in for cultivation in seven southern states it proved to be highly successful. A study conducted by the University of Agriculture in Dharwad found that more insect damage was done to conventional hybrids than to the bioengineered variety and that the bioengineered cotton reduced pesticide spraying by half or more, delivering a percent profit increase. Many growers of conventional crop varieties also suffered unanticipated and tragic crop losses. Most of the farmers who grew bioengineered cotton decided to plant it again in , however, and total planted acreage grew from approximately 1 million acres in to an estimated 3. What is especially noteworthy is that the government decree did not legalize commercial sales of the biotech soybean, it only authorized the planting of illegal seed already in the possession of farmers. Thus, by registering their intent to grow the bioengineered variety, farmers were informing the government of their prior guilt. There are few greater testaments to the benefits of biotechnology than the fact that thousands of poor farmers are willing to acknowledge having committed a crime just to gain access to the improved varieties. The clear lesson is that, where bioengineered varieties become available legal or not , most farmers themselves are eager to try them. In less developed nations, pesticides are typically sprayed on crops by hand, exposing farm workers to severe health risks. Some to Chinese cotton farmers die every year from acute pesticide poisoning because, until recently, the only alternative was risking near total crop loss due to voracious insects. Another study by economists at the University of Reading in the U. The productivity gains generated by bioengineered crops provide yet another important benefit: The loss and fragmentation of wildlife habitats caused by agricultural encroachment in regions experiencing the greatest population growth are widely recognized as among the most serious threats to biodiversity. Thus, increasing agricultural productivity is an essential environmental goal, and one that would be much easier in a world where bioengineering technology is in widespread use. Opponents of biotechnology argue that organic farming can reduce pesticide use even more than bioengineered crops can. But organic farming practices are less productive, because there are few effective organic controls for insects, weeds, or pathogens. Converting from modern, technology-based agriculture to organic would mean either reducing global food output significantly or sacrificing undeveloped land to agriculture. Moreover, feeding the anticipated population of eight or nine billion people in the year will mean increasing food production by at least 50 percent. As it is, the annual rate of increase in food production globally has dropped from 3 percent in the s to 1 percent today. Additional gains from conventional breeding are certainly possible, but the maximum theoretical yields for most crop plants are being approached rapidly. Despite the simplistic claims made by critics of plant technology, providing genuine food security must include solutions other than mere redistribution. There is simply no way for organic farming to feed a global population of nine billion people without having to bring substantially more land into agricultural use. Dramatically improving crop yields will prove to be an essential environmental and humanitarian goal. We have already realized significant environmental benefits from the biotech crops currently being grown, including a reduction in pesticide use of 20 million kg in the U. A Council for Agricultural Science and Technology report also found that recombinant DNA-modified crops in the US promote the adoption of conservation tillage practices, resulting in many other important environmental benefits: And, as we have seen, while the first generation of bioengineered crops was not designed with poor tropical farmers in mind, these varieties are highly adaptable. Examples of the varieties that now are being designed specifically for resource-poor farmers include virus-resistant cassava, insectresistant rice, sweet potato, and pigeon pea, and dozens of others. Chinese scientists, leaders in the development of both bioengineered and conventional rice have been urging their government to approve commercialization of their biotech varieties that have been

thoroughly tested and ready for market for several years. The next generation of products, now in research labs and field trial plots, includes crops designed to tolerate climatic stresses such as extremes of heat, cold, and drought, as well as crops designed to grow better in poor tropical soils high in acidity or alkalinity, or contaminated with mineral salts. A Mexican research group has shown that tropical crops can be modified using recombinant DNA technology to better tolerate acidic soils, significantly increasing the productivity of corn, rice and papaya. These traits for greater tolerance to adverse environmental conditions would be tremendously advantageous to poor farmers in less developed countries, especially those in Africa. Africa did not benefit from the Green Revolution as much as Asian and Latin American nations did because plant breeders focused on improving crops such as rice and wheat, which are not widely grown in Africa. Plus, much of the African dry lands have little rainfall and no potential for irrigation, both of which play essential roles in productivity success stories for crops such as Asian rice. But, by packaging technological inputs within seeds, biotechnology can provide the same, or better, productivity advantages as chemical or mechanical inputs, but in a much more user-friendly manner. Farmers could be able to control insect pests, viral or bacterial pathogens, extremes of heat or drought and poor soil quality, just by planting these crops. And the now-famous Golden Rice, with added beta carotene, is just one of many examples of bioengineered crops with improved nutritional content. Indian scientists have recently announced development of a new highprotein potato variety available for commercial cultivation. Another team of Indian scientists, working with technical and financial assistance from Monsanto, is developing an improved mustard variety with enhanced betacarotene in its oil. One lab at Tuskegee University is enhancing the level of dietary protein in sweet potatoes, a common staple crop in sub-Saharan Africa. Researchers are also developing varieties of cassava, rice, and corn that more efficiently absorb trace metals and micronutrients from the soil, have enhanced starch quality, and contain more beta-carotene and other beneficial vitamins and minerals. Ultimately, while no assurance of perfect safety can be made, breeders know far more about the genetic makeup, product characteristics, and safety of every modern bioengineered crop than those of any conventional variety ever marketed. Breeders know exactly what new genetic material has been introduced. They can identify where the transferred genes have been inserted into the new plant. They can test to ensure that transferred genes are working properly and that the nutritional elements of the food have been unchanged. None of these safety assurances have ever before been made with conventional breeding techniques. We have always lived with food risks. But modern genetic technology makes it increasingly easier to reduce those risks. Societal anxiety over the new tools for genetic modification is, in some ways, understandable. It is fueled by a variety of causes, including consumer unfamiliarity, lack of reliable information on the current safeguards in place, a steady stream of negative opinion in the news media, opposition by activist groups, growing mistrust of industry, and a general lack of awareness of how our food production system has evolved over time. But saying that public apprehension over biotechnology is understandable is not the same as saying that it is valid. Further Reading James, C. Preview-Global review of Commercialized Transgenic Crops: Council on Agricultural Science and Technology: Meeting the needs of the poor? Food and Agriculture Organization of the United Nations: Royal Society of London, the U. United Nations Development Programme. Kessler, C and Economidis, I. A Review of Results. Office for Official Publications of the European Communities:

Chapter 5 : Who's Spinning the Pro-GM Story?

A genetically modified organism (or GMO) refers to a lifeform that has been altered in its genetic structure through the techniques of science.

He was in charge of biotechnology issues for the Food and Drug Administration from to Yet, according to Miller, Monsanto blew its domination of the regulatory system by encouraging agencies like the FDA to introduce too much oversight and regulation. Brussels right to be cautious of GM foods 2. GM-free, like all food taboos, is a matter of taste 3. Their exposition of the advantages of genetically modified crop technology is itself an example of "bad science". Repeated assertions about the risks being minimal and the benefits "legion" are all too common and ought to be supported by properly conducted and peer-reviewed research work. Can the authors quote any survey that has been carried out to determine the affects of any GM product on human health? The apparent absence of evidence is of no value unless an exposed population has been properly investigated. The precautionary principle, properly applied, as it has been in the field of drug therapy, is an essential tool needed to protect us from both commercial exploitation and from well-meaning enthusiasts. We are fortunate in Europe that we now have protective legislation. History has many examples of the tragic results of unprotected exposure to new technology and new chemicals - tragic results that have also had an economic cost: Patricia Elliott, Saffron Walden, Essex 2. GM-free, like all food taboos, is a matter of taste By John C. But since when have rituals and taboos related to food had any relationship to science? There is no basis for saying that meat from animals killed using the methods prescribed by Islam and Judaism is nutritionally any better than that slaughtered in other ways. Perhaps more to the point, there is no evidence that kosher food is nutritionally preferable to non-kosher food. But the US food industry seems quite capable of separating kosher from non-kosher food at limited cost, and I do not hear any complaints from the food industry or others about the lack of scientific justification. We hear a lot these days about presentation and spin, but maybe, rather than talking about "GM-free" food, we should call it "European Kosher" and require that such food be certified with an appropriate symbol on the label. Jews are not required to eat kosher, nor are Europeans required to eat GM Free, but many wish to have the option. Surely the American way is to give them that option if they pay for it. As a resident of the US it seems to me that the use of the "precautionary principle" in the collection of the US blood supply is a more serious short-run problem than its use in relation to the European food supply. The approach of the US authorities means that people like myself, who have spent more than six months during the past 15 years in the UK, are not acceptable as a source of blood, even though there is no scientific evidence that bovine spongiform encephalopathy can be carried in blood. Many others are rejected for other "precautionary" reasons, and the result is a serious crisis in blood supplies and frantic calls for more donors. If Miller and Conko are really concerned about policies based on "bad science" that "cost the world dear", they should be focusing on energy and global warming. Where is the Hoover Institution when it is needed?

Chapter 6 : New "Frankenfood myth" book by lobbyists Conko and Miller

By Gregory Conko and C.S. Prakash December 13, In , while more than 14 million people in six drought-stricken southern African countries faced the risk of starvation, efforts by the U.N.'s World Food Programme were stifled by the global "GM" food controversy.

Chapter 7 : Let Them Eat Precaution - Wikipedia

Dr. C.S. Prakash is professor of plant genetics at Tuskegee University in Alabama, and a co-founder of the AgBioWorld Foundation.

Chapter 8 : Time for the GM Moratorium to Go

Genetically engineered crops can end world hunger / C.S. Prakash, Gregory Conko -- The risks of genetically modified foods have been exaggerated / Dick Taverne -- Genetically engineered crops protect the environment / Jonathan Rauch -- No: genetic engineering will not improve food and farming.

Chapter 9 : Conko & Miller - costing the world dear

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