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To: ATR-Agricultural Workshops <agriculturalworkshops@usdoj.gov>
Subject: Genetic manipulation is fraught with danger

Genetically inserting genes from mutant bacteria into plants so the plants can be sprayed with poisonous herbicide sounds dangerous to me as does genetically inserting pesticides into plants and when the consumer eats the food, they are eating the pesticide--Dangerous! I'll side with the environmental groups that GOT IT RIGHT!

We are confronted with the most powerful technology the world has ever known, and it is being rapidly deployed with almost no thought whatsoever to its consequences."
Dr Suzanne Wuerthele, U.S. Environmental Protection Agency (EPA) toxicologist...

Nobel Laureate in Medicine, George Wald, Professor of Biology, Harvard University, warned against genetic engineering:

Recombinant DNA technology faces our society with problems unprecedented not only in the history of science, but of life on Earth. It places in human hands the capacity to redesign living organisms, the products of three billion years of evolution. Such intervention must not be confused with previous intrusion upon the natural order of living organisms: animal and plant breeding..... All the earlier procedures worked within single or closely related species....Our morality up to now has been to go ahead without restriction to learn all that we can about nature. Restructuring nature was not part the bargain...this (new) direction may be not only unwise, but dangerous. Potentially, it could breed new animal and plant diseases, new sources of cancer, novel epidemics.

Michael Antoniou, a molecular geneticist involved in human gene therapy, explains that genetic modification "technically and conceptually bears no resemblance to natural breeding." The reproduction process works by both parents contributing thousands of genes to the offspring. They, in turn, get sorted naturally, and plant breeders have successfully worked this way for thousands of years.

Genetic manipulation is different and so far fraught with danger. It works by forcibly inserting a single gene from a species' DNA into another unnaturally.

"A pig can mate with a pig and a tomato can mate with a tomato. But there is no way that a pig can mate with a tomato and vice-versa." This process transfers genes across natural barriers that "separated species over millions of years of evolution" and managed to work. The biotech industry now wants us to believe it can do nature one better, and that genetic engineering is just an extension or superior alternative to natural breeding. It's unproved, indefensible pseudoscience mumbo jumbo, and that's the problem.

From The British Medical Association Report:

Members of the GM jury project were briefed on various aspects of genetic modification by a diverse group of acknowledged experts in the relevant subjects. The GM jury reached the conclusion that the sale of GM foods currently available should be halted and the moratorium on commercial growth of GM crops should be continued. These conclusions

were based on the precautionary principle and lack of evidence of any benefit. The Jury expressed concern over the impact of GM crops on farming, the environment, food safety and other potential health effects. In addition, there should be an end to assumptions that GM crops are necessary to feed the starving, given the complex food distribution, social and economic factors that lie behind such hunger.

Union of Concerned Scientists:

http://www.ucsusa.org/food_and_environment/genetic_engineering/

Toxins, Allergic reactions, Lack of safety testing, Increased pesticide use, biological pollution, The industrialization and monopolization of agriculture, Ethical problems.

Plant Geneticist Doreen Stabinsky

Super weeds, non-target impacts, horizontal gene transfer

Assessing the Risks of Genetic Engineering - An Interview with Doreen of Genetic

Engineering - An Interview with Doreen Stabinsky - Rural America / In Motion

Magazine ... Doreen Stabinsky: Risk assessment means assessing the risks

<http://www.inmotionmagazine.com/nztrip/ds1.html> -

Center for Food Safety

Why is genetically engineered food dangerous?

Genetic engineering uses material from organisms that have never been part of the human food supply. Without long-term testing no one knows if these foods are safe. Genetically engineering plants and animals for food is risky and unsafe.

Biotechnology is too young of a science to be able to fully assess or understand the potential problems that can come from altering the genes of living creatures. There is numerous potential for problems on many different levels. From the unpredictable occurrence of toxins and allergens, to environmental hazards, to ethical issues, biotechnology poses a serious threat.

Professor Richard Lewontin, professor of genetics, Harvard University, "We have such a miserably poor understanding of how the organism develops from its DNA that I would be surprised if we don't get one rude shock after another."

Professor Norman Ellstrand, ecological geneticist at the University of California, "within 10 years we will have a moderate to large-scale ecological or economic catastrophe, because there will be so many products being released."

South Africa had a smaller corn crop after a genetically engineered variety from Monsanto that was planted by 400 farmers on 75,000 hectares failed to pollinate.

US agronomist Dr Charles Benbrook warned last year: "

Australia should avoid the problems and market losses that the US experienced with GM."

What the environmental groups predicted would happen--did happen:

Killer Pigweeds Threaten Crops

The Weed Is No Longer Controlled with RoundUp herbicide.

Scientists blame farmers for excessive use of the herbicide.

Hundreds of thousands of acres of cotton and soybean fields are infested with Pigweed that is resistant to RoundUp herbicide.

Commercial herbicides, such as RoundUp, can be three times more toxic than pure glyphosate.

Erwin Chargoff, often referred to as the father of molecular biology, warned that all innovation does not result in "progress." Chargoff referred to genetic engineering as "a molecular Auschwitz" and warned the technology of genetic engineering poses a greater threat to the world than nuclear technology.

"I have the feeling that science has transgressed a barrier that should have remained inviolate," he wrote in his autobiography. Noting the "awesome irreversibility" of genetic engineering experiments, Chargoff warned that; "...you cannot recall a new form of life... It will survive you and your children and your children's children. An irreversible attack on the biosphere is something so unheard-of, so unthinkable to previous generations, that I could only wish that mine had not been guilty of it."