

hardwork and dedication. Congratulations to the Wilmer Institute at Johns Hopkins in Baltimore, Maryland as they celebrate their 75th anniversary this year.

GENETIC ENGINEERING: A TECHNOLOGY AHEAD OF THE SCIENCE AND PUBLIC POLICY?

HON. DENNIS J. KUCINICH

OF OHIO

IN THE HOUSE OF REPRESENTATIVES

Wednesday, November 1, 2000

Mr. KUCINICH. Mr. Speaker, genetically engineered (GE) food is and should be controversial. However, one voice has tended to dominate official discourse on the subject—that of the agri-business industry. These corporations and their paid public relations spokespersons have claimed: that GE food is identical to foods bred by selective (traditional) breeding; GE food is safe; GE food is associated with good environmental practices; and GE food will cure world hunger. Federal regulators have largely left these claims unchallenged, permitting the industry to introduce GE food rapidly and widely without producing scientific evidence to back their claims.

The public is skeptical. There is a growing popular movement that is critical of GE food promises and suspicious of its industry proponents. In other countries, consumers have flatly rejected GE food, and opposition to GE food is growing in this country. I believe that GE food is an example of a radically new technology, the massive commercialization of which has out-paced science and public policy.

In this article, I wish to examine the industry's claims and scrutinize federal actions. I will then present alternatives.

IS GE FOOD JUST LIKE TRADITIONAL FOOD?

There are significant and obvious differences between the genesis of traditional food and the manufacturing of GE food. Scientists note that conventional breeders rely on processes that occur in nature (such as sexual and asexual reproduction) to develop new plants. By contrast, genetic engineers use "gene guns" and bacteria among other methods to forcibly insert or "smuggle" foreign genetic material into a plant or animal. Genetic engineers also use genetic elements such as viruses which "turn on" the foreign genes in the new host organism as well as genes for antibiotic resistance that mark which cells have accepted the foreign genetic material.

Conventional breeders are bound by species boundaries that allow them to transfer genetic material only between related or closely related species. By contrast, the very purpose of genetic engineering is to allow scientists to transfer genes from completely unrelated life forms, creating such concoctions as corn that exudes toxins found in soil bacteria or tobacco that glows due to the insertion into its genome or a firefly gene.

Scientists warn that genetic engineers cannot always accurately predict the outcome of their experiments. Many scientists argue that the genetic engineering process is inherently unpredictable and that genetic engineers are operating with incomplete knowledge about

how genes interact with each other and with their external environment. While genetic engineers can with some precision locate and isolate a trait or gene to be inserted, they cannot control with any precision where that gene will be inserted into the host plant or how it will interact with other genes in the host plant. The new gene may disrupt the function or regulation of a plant's existing genes.

Field trials and lab research have documented the unpredictable nature of GE plants. In a 1990 study, scientists attempted to suppress the multiple colors of petunia flowers by turning off pigment genes in the plant. Researchers predicted that all the engineered flowers would be the same color. The flowers, however varied in terms of the amount of color in their flowers and in the pattern of color in individual flowers. Some flowers also changed color as the season changed.

The unpredictability of GE crops was further highlighted in 1997, when farmers growing GE cotton reported that the plants had stunted growth, deformed root systems and produced malformed cotton bolls.

IS GE FOOD SAFE?

Despite endless reassurances by biotechnology companies and the Food and Drug Administration (FDA) that GE food is safe to eat, several concerns have arisen. Genetic engineering has the potential to introduce new allergens and toxins into food, increase levels of natural toxins, reduce the nutritional quality of food and increase the rate of antibiotic resistance in bacteria. Yet, our experience with GE crops is limited. They have only been growing on a wide scale for five years and, consequently, have only been part of the American diet for the same amount of time. The long-term consequences of a diet of GE food are therefore unknown. To date, not a single peer-reviewed study has been conducted on the long-term consequences for humans of eating a diet of GE food. Moreover, without segregation and labeling protections in place to inform consumers about what they are eating, it will be difficult to pinpoint and monitor whether the presence of GE material in food products is impacting human health.

The lack of long-term safety studies has correctly led the Environmental Protection Agency (EPA) to not approve Starlink corn for human consumption because of concerns with potential allergens. Unfortunately, this corn was found in Taco Bell taco shells found on our grocery stores. Kraft, the maker of these taco shells, recalled 2.5 million boxes of these contaminated shells.

ENVIRONMENTAL IMPACTS ASSOCIATED WITH GE FOOD

Despite claims that GE crops will help the environment, to date, the main focus of biotechnology has been to generate herbicide resistant crops and pest and disease resistant crops—crops that encourage more intensive use of pesticides. The failure of GE to move agriculture in a more sustainable direction is a serious threat to the environment.

Equally serious is the threat of genetic pollution which is potentially irreversible. Studies are revealing that predictions of gene flow, harm to beneficial insects, insect resistance, and the

Numerous studies have shown the potential fallout of transgenic "insect-resistant" crops on the environment. Both lab and field studies

have confirmed that pollen from B.t. corn is lethal to monarch butterfly larvae. Swiss entomologists have found that lacewings and lady bugs are negatively impacted when they feed on organisms that have ingested the GE corn. Research undertaken at the New York University shows that contrary to expectation, B.t. toxins bind to soil particles and can persist in the soil for up to 250 days. These toxins have been shown to harm soil microorganisms that break down organic matter.

Given that half of our cotton crop and nearly one-third of our corn crop are GE "insect resistant" varieties, it is alarming that such studies were not conducted earlier, underscoring the fact that the experiment with GE crops is taking place in farmers' fields and on consumer plates rather than in controlled, laboratory settings.

Insect resistance to the B.t. toxin poses a serious threat for organic farmers who use the toxin in a natural spray as part of an integrated pest management scheme. A study published in Science found that a common pest of cotton was able to build up resistance to insect resistant varieties very quickly. If the toxin is rendered useless, organic farmers will be deprived of an essential tool.

Not content with simply engineering food crops, biotechnology companies are introducing new test tube "products." GE engineered salmon that are close to commercialization may be able to "outcompete" wild salmon in reproduction and further deplete this endangered species. Genetically engineered trees are also in the product line and may introduce ecological threats to our national forests.

CAN BIOTECH FEED THE WORLD?

There is no question that the nations of the world must take action to stop global hunger. It is a travesty that 800 million people go hungry each day. Biotech proponents argue that genetic engineering is the solution to the problem because it will increase crop yields to feed a growing population. A techno-fix, however, ignores the root causes of hunger.

Hunger persists today despite the fact that increases in food production during the past 35 years have outstripped the world's population growth by 16 percent. Indeed, the United Nations Food and Agriculture Organization recently stated that growth in agriculture will continue to outstrip world population growth. The Institute for Food Policy notes that there is no relationship between the prevalence of hunger in a given country and its population. The real causes of hunger are poverty, inequality and lack of access. Too many people are too poor to buy the food that is available (but poorly distributed) or lack the land and resources to grow it themselves.

The much heralded "Green Revolution" was an example of the failure of new technology applied to farming to reduce hunger. Using the technology, developing countries significantly increased crop yields, but they nevertheless failed to eliminate hunger, because they failed to address the root social and economic causes of hunger. Furthermore, the Green Revolution exacerbated poverty and social inequality. It favored larger, wealthier farmers who could afford the new high yielding crop varieties and the chemical fertilizers, pesticides, and irrigation systems that accompanied them. Left behind were poorer farmers

unable to afford such inputs. In the meantime, the heavy use of chemical fertilizers and pesticides generated resistant pests and degraded the fertility of the soil, undermining the very basis for future production.

The growing use of patents to "protect" biotechnology innovations also threatens subsistence farmers in the developing world and could exacerbate hunger. Patents have been taken out on plants, animals, bacteria as well as genes, cells and body parts. Sanctioned and imposed by the global trading system, this "commodification of life" has allowed multinational companies to patent staple crops in developing countries such as yellow beans in Mexico, South Asian basmati rice as well as medicinal herbs, livestock and marine species. Such a predatory system threatens to enable companies to maximize their control over farming processes and the world's food resources.

Landmark studies are showing that traditional farming methods, including multi-cropping and small scale techniques are proving to be just as effective in producing high yields as conventional farming. Most recently, in one of the largest agricultural experiments ever, thousands of rice farmers in China were able to double the yields of their crops simply by planting a mixture of two different rices—a practice that did not require using chemical treatments or investing any new capital. Clearly, these types of farming methods are suited to local needs and ecosystems. They will protect the environment and increase an affordable food supply. Biotechnology, however, will likely repeat the failure of the Green Revolution's fertilizers and pesticides. Biotech will not solve the problem of world hunger but may exacerbate it.

HONORING BRUCE S. HASLAM

HON. JOSEPH M. HOEFFEL

OF PENNSYLVANIA

IN THE HOUSE OF REPRESENTATIVES

Wednesday, November 1, 2000

Mr. HOEFFEL. Mr. Speaker, today I recognize Lieutenant Bruce S. Haslam, who is retiring after 26 years from the Abington Township Police Department in Montgomery County, Pennsylvania.

Lt. Haslam began his career in law enforcement as a Patrol Officer and moved up the ranks to Detective Lieutenant. He has been involved in many programs throughout his tenure and the community has benefited greatly from his service.

Lt. Haslam developed and implemented one of the first Officer Street Survival programs in the region. He has been involved in the Abington Police D.A.R.E. program from its inception. Today, the D.A.R.E. program is taught in all Abington schools.

Helping victims of domestic violence has been a priority for Lt. Haslam. He coordinated domestic violence issues for the department by working with state and county agencies to combat this abuse.

Lt. Haslam served the larger community as well. He was in active duty in the United States Army and is now a Colonel in the U.S. Army Reserves. He participated in special as-

signments in Haiti in 1994 and returned to service in Bosnia from 1998–1999.

It is an honor and privilege to recognize Lt. Bruce Haslam as he retires from the Abington Township Police Department. I congratulate him on 26 years of extraordinary service to the people of Abington and the United States of America.

INTRODUCING A BILL TO DEFEND AMERICAN JUDGMENT AND FREEDOM

HON. JOE KNOLLENBERG

OF MICHIGAN

IN THE HOUSE OF REPRESENTATIVES

Wednesday, November 1, 2000

Mr. KNOLLENBERG. Mr. Speaker, today I submit legislation to save Americans' opportunities and to embrace Americans' judgment and freedom. This legislation defends the people's right to fully participate in government and to retain some measure of control over our own lives against this insatiable Administration, ever seeking greater powers over us, the people.

My bill extends the public comment period on the flawed regulatory proposals pertaining to clothes washers, air conditioners and heat pumps. I am proud that a bipartisan group of fifteen esteemed colleagues join with me as original cosponsors of the bill. The bill will ensure that the voice of America's working people is heard.

The special interests left the American consumers and taxpayers out of the backroom scam. The American family and the working people are being asked to bear the burden of these proposed regulations.

The average American family is not yet aware of the proposed mandate. They have not been informed of the cost they will be asked to shoulder—over one thousand dollars in total per household according to the scant government estimates. They have not been told of the loss of consumer choice that these intrusive regulations would entail.

Today's struggle hits American families where we live, in our homes.

1. The proposed mandate would hurt working Americans by severely limiting our options of clothes washers, air conditioning, and heat pumps.

2. Worse yet, the proposed mandate would force us against our will to buy products that we refuse to buy.

3. It gets still worse—we will have to pay hundreds of dollars more per product—paying as much as five times the cost of the product we currently select.

4. It gets even worse—the special interest groups know and have publicly stated that they know the American people don't want these products.

5. No, we're not done yet. The special interest groups themselves wrote the mandate!

6. Consumers and taxpayers were not represented.

7. In a backroom scam to benefit themselves, the special interest groups took an oath to work together purposefully to the detriment of consumer selection and to subjugate the will of the people.

8. Is there no end to the hypocrisy? A key part of the scam includes taking hundreds of millions of taxpayer dollars over and above taking hundreds of millions of consumer dollars. That's right—the scam includes 60 million dollars per manufacturer in tax breaks over and above the hundreds of millions of dollars per manufacturer in increased revenue forcibly taken from the purchasers in sales of the products.

9. Worse yet, the U.S. government colluded with the special interests and the U.S. Department of Energy has rubber stamped the mandate that the special interests concocted.

10. On top of all that, taxpayer dollars are being used in egregious public relations for the mandate against the people's will. Specifically, our tax dollars are being used for a free country/western music concert series to promote the mandate. Also, our tax dollars are being used to give away free washing machines to the people in Bern, Kansas, and Reading, Massachusetts as a promotion for the mandate.

Americans are not able to respond without additional time over and above the absolute minimum 60 days allowed by law. American working families are not equipped to read the voluminous and tediously technical Federal Register each day. In contrast, the special interest groups have fleets of lobbyists and computers and lawyers to comb through and analyze on a daily basis the regulatory proposals that affect them. The special interest groups exploit the disparity to tread on the will of the people. Well, sixteen of us Members of Congress have already taken up the "Don't Tread on Me" flag and more will join us.

A real issue here is the rush to regulate. Secretary Bill Richardson stated the Department is "on a rush to establish a . . . legacy." The Department has done the absolute minimum it can to allow the people's voice to be heard by setting the minimum comment period of 60 days. The Department has given Congress virtually no time to act, just proposing the regulation on October 5, 2000. We the people deserve more time than the minimum to defend our will.

This situation is exactly the type in which more time for people's comments is in order. All the elements for a comment extension are present here:

1. Virtually all American families are affected by the mandate;

2. The burden of regulations affects the American people so directly;

3. The inclination of the American people is thwarted by the mandate;

4. These mandated products are available now and people, as a rule, refuse to purchase them;

5. The cost increase of the mandate is so high, more than doubling the cost in many cases;

6. A last-minute rush to regulate has been admitted by the Secretary;

7. Having stated on May 23, 2000, that the rule would be proposed in June of 2000, the Department of Energy is grossly behind schedule with an October 5, 2000 publishing of the proposal;

8. Working Americans should not suffer as a result of gross bureaucratic delays and ineptitude, thus we Americans should not have our