from Chapter 7 discharge to Chapter 13 reorganization, based on the income of the debtor and other factors. The bill permits creditors to be involved if they believe the debtor has the ability to repay. However, if a creditor abuses that power and brings such motions without substantial justification, the creditor is penalized. Also, the legislation places more responsibility on attorneys to steer individuals toward paying what they can.

The bill makes reforms without jeopardizing the truly needy. For example, the bill has special provisions to protect mothers who depend on child support by making these payments the top priority for payment in bankruptcy.

It is too easy to file for bankruptcy. It is too easy to get the slate wiped clean. We recognize that some people need a fresh start. But a fresh start should not mean a free ride. We must stop this type of abuse.

I urge my colleagues to support this important reform measure.

The PRESIDING OFFICER. The Senator from Missouri.

Mr. BOND. Madam President, I ask unanimous consent to be permitted to speak for 15 minutes as in morning business.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BOND. I thank the Chair and my colleagues.

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THE BENEFITS AND POLITICS OF BIOTECHNOLOGY

Mr. BOND. Madam President, as we move into this next century, we face a great opportunity and great challenge. We need only to look backward to help contemplate the immense change and innovation that is in front of us. While positive change is to the long-term benefit of all, it typically results in short-term difficulties, anxiety, and fear for some. How we cope with those difficulties defines our vision and tests our courage. In the last century we saw the industrial age and the computer age. We experienced fits of fear regarding everything from aviation, penicillin, industrialization, computerization and most recently, the non-calamity, fortunately, known as Y2K.

Remarkably, plant technology in this half-century has helped make it possible for the U.S. farmer, who in 1940 fed 19 people, to fee 129 today.

Meanwhile, worldwide population grows and farmland shrinks, Policymakers, farmers, doctors, business leaders, scientists, and others look ahead and search for critical tools to meet the increasing demands of a growing and changing world.

Nobel prizewinning chemist Robert F. Curl of Rice University said that ''it is clear that the 21st will be the century of biology.''

Scientists, medical doctors, Government officials, farmers, and others have testified before the Congress and elsewhere to the benefits of this new generation of technology, which may offer the sustainable production of safer amd more abundant food sources, new vaccines and medicines, as well as biodegradable plastics and cleaner energy alternatives.

Senator MACK hosted a hearing of the Joint Economic Committee in September entitled ''Putting a Human Face on Biotechnology'' where Tour de France winner Lance Armstrong testified about his personal experience using biotechnology and will to overcome cancer. Senators LUGAR and HARKIN held 2 days of hearings in October with a diverse number of distinguished witnesses to discuss the science and regulation of biotechnology.

Bipartisan members including Senators KERRY, DURBIN, HAGEL, CRAIG, FRIST, CONRAD, LUGAR, GORTON, GRASSLEY, ASHCROFT, ROBB, BURNS, GRAMS, GORDON SMITH, BAUCUS, HELMS, HUTCHISON, ROBERTS, BAYH, BROWNBACK, CRAPO, and COVERDELL have joined me in expressing to the President our bipartisan commitment to biotechnology.

We urge the administration and the State Department to be firm in their negotiations in Montreal, to say that the phyto sanitary agreements are adequate in all we need to regulate biotechnology.

As chairman of the Senate Appropriations Subcommittee which funds public research activities at the National Science Foundation, I have worked with my partner, Senator MIKULSKI, to win congressional approval of $150 million in the last 3 years for the Plant Genome Initiative at the National Science Foundation to study the structure, organization, and function of genomes of significant plants important to improving human health and the environment.

Recently, I received a letter signed by over 500 scientists revealing the exceptionally strong scientific consensus endorsing biotechnology. These are public- and private-sector scientists, the majority of whom are from academic institutions representing nearly every State, a number of foreign countries, the National Academy of Sciences, private foundations, Federal research agencies, and our National Labs. Here is some of what they told me about biotechnology:

> The ultimate beneficiaries of technological innovation have always been consumers, both in the United States and abroad. In developing countries, biotechnological advances will provide means to overcome vitamin deficiencies, to supply vaccines for killer diseases like cholera and malaria, to increase production and protect fragile natural resources, and to grow crops under normally unfavorable conditions.

They continued:

> We recognize that no technology is without risks. At the same time, we have confidence in the current U.S. regulatory system provided by the USDA, EPA, and FDA. The U.S. system has worked well and continues to evolve as scientific advancements are achieved.

They strongly endorse the U.S. regulatory multiagency approval system, which they say works well.

The American Medical Association is supportive also. In policy H–480.985, ''Biotechnology and the American Agricultural Industry'' they say the following:

> It is the policy of the AMA to (1) endorse or implement programs that will convince the public and government officials that genetic manipulation is not inherently hazardous and that the health and economic benefits of recombinant DNA technology greatly exceed any risk posed to society; (2) where necessary, urge Congress and federal regulatory agencies to develop appropriate guidelines which will not impede the progress of agricultural biotechnology, yet will ensure that adequate safety precautions are enforced; (3) encourage and assist state medical societies to coordinate programs which will educate physicians in recombinant DNA technology as it applies to public health, such that the physician may respond to patient query and concern; (4) encourage physicians, through their state medical societies, to be public spokespersons for those agricultural biotechnologies that will benefit public health; and (5) actively participate in the development of national programs to educate the public about the benefits of agricultural biotechnology.

Remarkably, however, we find ourselves at a crossroads as a strange mixture of forces endeavor not to ensure that biotechnology is safe—which is and should be our collective purpose—but to discredit and eliminate biotechnology. Opposition has been motivated variously by protectionist sentiment, by political intimidation, by competing business, and by scientifically unsubstantiated fear of technology. Activists and protectionists in Europe have conspired with a level of success that is stunning. Their goal is to stroke fear and use intimidation to frustrate and undermine biotechnology.

Just this week, it was reported by the Detroit News that:

> A visiting Michigan State University associate professor whose office was the target of a fire set by radical environmentalists on New Year's Eve said Sunday that she heads a project aimed at increasing food production and making food more nutritious.

The purpose of her work was to ensure that we use agricultural knowledge and tools to address those problems.

Catherine Ives, director of the Agricultural Biotechnology for Sustainable Productivity, which is based at Michigan State University, said, ''The whole point of the project is to make land more productive so we don't have to damage the environment.'' The paper reported, ''The goal of the project is to develop long-term solutions for food security in the developing world, where undernourishment is an epidemic.'' ''We know that there are 840 million people in the world who don't have enough to eat,'' Ives said. ''The use of agricultural knowledge and tools will help in addressing that problem.''

Dr. Martina McGlaughlin, Director of Biotechnology at the University of California at Davis, in a November 1, 1999, column in the Los Angeles Times reinforced the dilemma of population growth coupled with the finite quantity of arable land:

[u]nless we will accept starvation or placing parks and the Amazon Basin under the plow, there really is no alternative to applying biotechnology to agriculture.

Dr. McGlaughlin continued:

The most cost-effective and environmentally sound general method for controlling pests and disease is the use of DNA.

This approach has led to a reduction in the use of sprayed chemical insecticides. According to the National Agricultural Statistics Service, 2 million fewer pounds of insecticide were used in 1998 to control bollworm than were used in 1995, before ''Bt'' cotton was introduced. And the Bt gene—introduced into the crop plant, not sprayed into the atmosphere—is present in minute amounts and spares beneficial insects.

She concluded:

Millions of people have eaten the products of genetic engineering and no adverse effects have been demonstrated. The proper balance of safety testing between companies and the government is a legitimate area for further debate. So are environmental safeguards. But the purpose of such debate should be to improve biotech research and enhance its benefits to society, not stop it in its tracks.

It should be mentioned that her students at Cal Davis were also victimized by law-breakers who vandalized their research testing plots. Clearly, if the radicals were as interested in understanding as they are in intimidation, eliminating research is the last thing they would consider.

In an Op-Ed in the New York Times entitled ''Who's Afraid of Genetic Engineers?'' former President Jimmy Carter outlined the sad irony. He said:

Imagine a country placing such rigid restrictions on imports that people would not get vaccines and insulin. And imagine those same restrictions being placed on food products as well as on laundry detergent and paper. As far-fetched as it sounds, many developing countries and some industrialized on may do just that.

He concluded:

If imports . . . are regulated unnecessarily, the real losers will be the developing nations. Instead of reaping the benefits of decades of discovery and research, people from Africa and Southeast Asia will remain prisoners of outdated technology. Their countries could suffer greatly for years to come. It is crucial that they reject the propaganda of extremists groups before it is too late.

Renowned scientists have dedicated their lives to understanding biotechnology and using it to the benefit of mankind to solve problems of hunger, disease and environmental degradation.

These problems are considerable now, but will grow in magnitudes in the years ahead. In the tabloid press, however, a teenager dressed up as a corn cob will get as much attention and is attributed the same credibility as leading scientists, whose work is subjected to rigorous peer review.

We need to be clear about several issues. First, our Government and its citizens are second to none in our collective commitment to food safety. We have a rigorous multi-agency approval process that has stood the test of time since 1938. It is based not on politics but on scientific consensus. It is supported by bipartisan Members of each body who have the strongest commitment to food safety and environmental protection. None of us are advocates for unfettered technology. As with any technology, there are limits that will be and must be subjected to law, not to mention common sense.

Second, we need to realize that there are strong elements in the European Union who are more than happy to exploit fears—fears that they helped create—to provide short-term protection to their farmers from imports. In a sentence, fear and hysteria, without scientific basis, is being used by some to limit the productivity of foreign farmers—period. Meanwhile, opportunistic food companies such as ADM and Novartis are knowingly undermining our scientists and trade negotiators to placate the Luddites and protectionists.

Finally, let me emphasize this critical point. The issue of risk is not one-dimensional. Yes, we must understand and evaluate the relative risk to a Monarch Butterfly larvae. Additional research has answered already many of those questions. But there is another risk. That risk is that naysayers and the protectionists succeed in their goals to kill biotechnology and condemn the world's children to unnecessary blindness, malnutrition, sickness and environmental degradation.

Dr. C.S. Prakash directs the Center for Plant Biotechnology Research at Tuskegee University in Tuskegee, Ala, said the following in a column for the Atlanta Journal-Constitution:

Anti-technology activists accuse corporations of ''playing God'' by genetically improving crops, but it is these so-called environmentalists who are really playing God, not with genes but with the lives of poor and hungry people.

While activist organizations spend hundreds of thousands of dollars to promote fear through anti-science newspaper ads, 1.3 billion people, who live on less than $1 a day, care only about findings their next day's meal. Biotechnology is one of the best hopes for solving their food needs today, when we have 6 billion people, and certainly in the next 30 to 50 years, when there will be 9 billion on the globe.

Those people, who battle weather, pests and plant disease to try to raise enough for their families, can benefit tremendously from biotechnology, and not just from products created by big corporations. Public-sector institutions are conducting work on high-yield rice, virus-resistant sweet potato and more healthful strains for cassava, crops that are staples in developing countries.

The development of local and regional agriculture is the key to addressing both hunger and low income. Genetically improved food is ''scale neutral,'' in that a poor rice farmer with one acre in Bangladesh can benefit as much as a larger farmer in California. And he doesn't have to learn a sophisticated new system; he only has to plant a seed. New rice strains being developed through biotechnology can increase yields by 30 to 40 percent. Another rice strain has the potential to prevent blindness in millions of children whose diets are deficient in Vitamin A.

Edible vaccines, delivered in locally grown crops, could do more to eliminate disease than the Red Cross, missionaries and U.N. task forces combined, at a fraction of the cost. But none of these benefits will be realized if Western-generated fears about biotechnology halt research funding and close borders to exported products.

For the well-fed to spreadhead fear-based campaigns and suppress research for ideological and pseudo-science reasons is irresponsible and immoral.

Dr. Prakash just released a petition signed by more than 600 scientists declaring support of agricultural biotechnology. In his press release he noted, ''We in the scientific community felt it necessary to counteract the baseless attacks so often being made on biotechnology and genetically modified foods. Biotechnology is a potent and valuable tool that can help make foods more productive and nutritious. And, contrary to anti-biotech activists, they can even advance environmental goals such as biodiversity.''

Not content to live with their own brand of ludditism, European activists have shifted the battleground and they are now looking to export—not answers or solutions or constructive proposals—but fear, hysteria and unworkable restrictions to Asia, South America and even the United States. Many have stayed out of this debate thinking the controversy will blow over as it does with most regulated technologies. Many, particularly those who understand the science of the issue, had been silent, thinking, possibly that people would understand and that the technology would sell itself.

I have said from the beginning that we could not take it for granted that people would embrace the technology because it is complex. I have said from the beginning that American consumers would want information. Consumers who know the facts—who know the benefits this technology will provide—will endorse it. American consumers demand food safety, but they also embrace technology and progress. They are not satisfied to say what we are doing is good enough. And finally, they want to base their decisions on science not fiction and it is the open discussion of facts that the vandals, the protectionists, and the luddites fear the most.

President Clinton outlined what is at stake last week in proclaiming January 2000 as National Biotechnology Month:

Today, a third of all new medicines in development are based on biotechnology. Designed to attack the underlying cause of an illness, not just its symptoms, these medicines have tremendous potential to provide not only more effective treatments, but also cures. With improved understanding of cellular and genetic processes, scientists have opened exciting new avenues of research into treatments for devastating diseases—like Parkinson's and Alzheimer's, diabetes, heart disease, AIDS, and cancer—that affect millions of Americans. Biotechnology has also given us several new vaccines, including one for rotavirus, now being tested clinically, that could eradicate an illness responsible for the deaths of more than 800,000 infants and children each year.

The impact of biotechnology is far-reaching. Bio-remediation technologies are cleaning our environment by removing toxic substances from contaminated soils and ground

water. Agricultural biotechnology reduces our dependence on pesticides. Manufacturing processes based on biotechnology make it possible to produce paper and chemicals with less energy, less pollution, and less waste. Forensic technologies based on our growing knowledge of DNA help us exonerate the innocent and bring criminals to justice.

A question is whether we want to continue with a fixed number of agricultural uses or if we want to expand them to provide farmers and consumers new options and new opportunities. A question for some is whether we want to be more pro-environment and pro-health and nutrition than we are anti-corporate.

Like many of my colleagues here in the Senate, I have consulted scores of scientists in the academic world, in the public sector and in the private sector. I have consulted medical professionals, and farmers for their practical experience regarding biotechnology. But let me finish by reading you a quote from a December 25, 1999, interview in ''New Scientist'' and you consider for yourself who might be the source:

> I believe we are entering an era now where pagan beliefs and junk science are influencing public policy. GM foods and forestry are both good examples where policy is being influenced by arguments that have no basis in fact or logic.

The source is not a corporate leader, a Senator, or a university scientist. It is an ecologist with a Ph.D.

That ecologist is Patrick Moore, one of the founding members of Greenpeace and a veteran of the frontline against everything from whaling to nuclear waste since the 1970s.

The scientific consensus amongst government and academic scientists in the U.S. is extraordinary. The scientific community in Europe, some of whom I have met with agree, but have been intimidated and silenced. Please give the scientific and medical communities the opportunity to speak to these complex issues before you are swayed by the tabloids in Europe, those who may have their head burried in the flat earth, and the vandals and extremists who have been condemned even by some of their very own.

We have a system in the U.S. to identify and evaluate relative risk, and, if necessary, mitigate those risks. The focus of international leaders should be on working constructively to identify and evaluate relative risk so that our people may have safely the options of biotechnology available to them. The development of this technology is not recreational. It is to solve real world problems and the possibilities are truly breathtaking. There is too much at stake for those who know better to remain passive.

In 1921, Missouri's renowned plant scientist, George Washington Carver said: ''I wanted to know the name of every stone and flower and insect and bird and beast. I wanted to know where it got its color, where it got its life—but there was no one to tell me.'' He added that: ''No individual has any right to come into the world and go out of it without leaving behind him distinct and legitimate reasons for having passed through it.'' This issue will be a test of our collective vision, discipline, and courage.

Madam President, I thank the Chair and my colleagues. I ask unanimous consent to print in the RECORD materials from President Clinton, President Carter, Drs. Prakash and McGlaughlin, New Scientist, and the 500 scientists' letter.

There being no objection, the materials were ordered to be printed in the RECORD, as follows:

[From the White House, Office of the Press Secretary, Jan. 20, 2000]

NATIONAL BIOTECHNOLOGY MONTH, 2000

(By the President of the United States of America—A Proclamation)

As we stand at the dawn of a new century, we recognize the enormous potential that biotechnology holds for improving the quality of life here in the United States and around the world. These technologies, which draw on our understanding of the life sciences to develop products and solve problems, are progressing at an exponential rate and promise to make unprecedented contributions to public health and safety, a cleaner environment, and prosperity.

Today, a third of all new medicines in development are based on biotechnology. Designed to attack the underlying cause of an illness, not just its symptoms, these medicines have tremendous potential to provide not only more effective treatments, but also cures. With improved understanding of cellular and genetic processes, scientists have opened exciting new avenues of research into treatment for devastating diseases—like Parkinson's and Alzheimer's, diabetes, heart disease, AIDS, and cancer—that affect millions of Americans. Biotechnology has also given us several new vaccines, including one for rotavirus, now being tested clinically, that could eradicate an illness responsible for the deaths of more than 800,000 infants and children each year.

The impact of biotechnology is far-reaching. Bioremediation technologies are cleaning our environment by removing toxic substances from contaminated soils and ground water. Agricultural biotechnology reduces our dependence on pesticides. Manufacturing processes based on biotechnology make it possible to produce paper and chemical with less energy, less pollution, and less waste. Forensic technologies based on our growing knowledge of DNA help us exonerate the innocent and bring criminals to justice.

The biotechnology industry is also improving lives through its substantial economic impact. Biotechnology has stimulated the creation and growth of small businesses, generated new jobs, and encouraged agricultural and industrial innovation. The industry currently employs more than 150,000 people and invests nearly $10 billion a year on research and development.

Recognizing the extraordinary promise and benefits of this enterprise, my Administration has pursued policies to foster biotechnology innovations as expeditiously and prudently as possible. We have supported steady increases in funding for basic scientific research at the National Institutes of Health and other science agencies; accelerated the process for approving new medicines to make them available as quickly and safely as possible; encouraged private-sector research investment and small business development through tax incentives and the Small Business Innovation Research program; promoted intellectual property protection and open international markets for biotechnology inventions and products; and developed public databases that enable scientists to coordinate their efforts in an enterprise that has become one of the world's finest examples of partnership among university-based researchers, government, and private industry.

Remarkable as its achievements have been, the biotechnology enterprise is still in its infancy. We will reap even greater benefits as long as we sustain the intellectual partnership and public confidence that have moved biotechnology forward thus far. We must strengthen our efforts to improve science education for all Americans and preserve and promote the freedom of scientific inquiry. We must protect patients from the misuse or abuse of sensitive medical information and provide Federal regulatory agencies with sufficient resources to maintain sound, science-based review and regulation of biotechnology products. And we must strive to ensure that science-based regulatory program worldwide promote public safety, earn public confidence, and guarantee fair and open international markets.

Now, therefore, I, William J. Clinton, President of the United States of America, by virtue of the authority vested in me by the Constitution and laws of the United States, do hereby proclaim January 2000 as National Biotechnology Month. I call upon the people of the United States to observe this month with appropriate programs, ceremonies, and activities.

In witness whereof, I have hereunto set my hand this nineteenth day of January, in the year of our Lord two thousand, and of the Independence of the United States of America the two hundred and twenty-fourth.

[From the New York Times, Aug. 26, 1998]

WHO'S AFRAID OF GENETIC ENGINEERING?

(By Jimmy Carter)

Imagine a country placing such rigid restrictions on imports that people could not get vaccines and insulin. And imagine those same restrictions being placed on food products as well as on laundry detergent and paper.

As far-fetched as it sounds, many developing countries and some industrialized ones may do just that early next year. They are being misled into thinking that genetically modified organisms, everything from seeds to livestock, and products made from them are potential threats to the public health and the environment.

The new import proposals are being drafted under the auspices of the biodiversity treaty, an agreement signed by 168 nations at the 1992 Earth Summit in Rio de Janeiro. The treaty's main goal is to protect plants and animals from extinction.

In 1996, nations ratifying the treaty asked an ad hoc team to determine whether genetically modified organisms could threaten biodiversity. Under pressure from environmentalists, and with no supporting data, the team decided that any such organism could potentially eliminate native plants and animals.

The team, whose members mainly come from environmental agencies in more than 100 different governments, should complete its work within six months and present its final recommendation to all the nations (the United States is not among them) that ratified the treaty. If approved, these regulations would be included in a binding international agreement early next year.

But the team has exceeded its mandate. Instead of limiting the agreement to genetic modifications that might threaten biodiversity, the members are also pushing to regulate shipments of all genetically modified organisms and the products made from them.

This means that grain, fresh produce, vaccines, medicines, breakfast cereals, wine, vitamins—the list is endless—would require written approval by the importing nation before they could leave the dock. This approval could take months. Meanwhile, barge costs would mount and vaccines and food would spoil.

How could regulations intended to protect species and conserve their genes have gotten so far off track? The main cause is anti-biotechnology environmental groups that exaggerate the risks of genetically modified organisms and ignore their benefits.

Anti-biotechnology activists argue that genetic engineering is so new that its effects on the environment can't be predicted. This is misleading. In fact, for hundreds of years virtually all food has been improved genetically by plant breeders. Genetically altered antibiotics, vaccines and vitamins have improved our health, while enzyme-containing detergents and oil-eating bacteria have helped to protect the environment.

In the past 40 years, farmers worldwide have genetically modified crops to be more nutritious as well as resistant to insects, diseases and herbicides. Scientific techniques developed in the 1980's and commonly referred to as genetic engineering allow us to give plants additional useful genes. Genetically engineered cotton, corn and soybean seeds became available in the United States in 1996, including those planted on my family farm. This growing season, more than one-third of American soybeans and one-fourth of our corn will be genetically modified. The number of acres devoted to genetically engineered crops in Argentina, Canada, Mexico and Australia increased tenfold from 1996 to 1997.

The risks of modern genetic engineering have been studied by technical experts at the National Academy of Sciences and World Bank. They concluded that we can predict the environmental effects by reviewing past experiences with those plants and animals produced through selective breeding. None of these products of selective breeding have harmed either the environment or biodiversity.

And their benefits are legion. By increasing crop yields, genetically modified organisms reduce the constant need to clear more land for growing food. Seeds designed to resist drought and pests are especially useful in tropical countries, where crop losses are often severe. Already, scientists in industrialized nations are working with individuals by developing countries to increase yields of staple crops, to improve the quality of current exports and to diversify economies by creating exports like genetically improved palm oil, which may someday replace gasoline.

Other genetically modified organisms covered by the proposed regulations are essential research tools in medical, agricultural and environmental science.

If imports like these are regulated unnecessarily, the real losers will be the developing nations. Instead of reaping the benefits of decades of discovery and research, people from Africa and Southeast Asia will remain prisoners of outdated technology. Their countries could suffer greatly for years to come. It is crucial that they reject the propaganda of extremist groups before it is too late.

[From the Atlanta Journal-Constitution, Dec. 5, 1999]

GENETIC RESEARCH: FOES OF BIOTECHNOLOGY IGNORE GLOBAL HUNGER

(By C.S. Prakash)

Anti-technology activists accuse corporations of ''playing God'' by genetically improving crops, but it is these so-called environmentalists who are really playing God, not with genes but with the lives of poor and hungry people.

While activist organizations spend hundreds of thousands of dollars to promote fear through anti-science newspaper ads, 1.3 billion people, who live on less than $1 a day, care only about finding their next day's meal. Biotechnology is one of the best hopes for solving their food needs today, when we have 6 billion people, and certainly in the next 30 to 50 years, when there will be 9 billion on the globe.

Those people, who battle weather, pests and plant disease to try to raise enough for their families, can benefit tremendously from biotechnology, and not just from products created by big corporations. Public-sector institutions are conducting work on high-yield rice, virus-resistant sweet potato and more healthful strains of cassava, crops that are staples in developing countries.

But none of these benefits will be realized if Western-generated fears about biotechnology halt research funding and close borders to exported products. Public perception is being manipulated by fringe groups opposed to progress and taken advantage of by politicians favoring trade protectionism.

There is no safety reason for this. Foods produced through biotechnology are just as safe, if not safer, than conventionally produced foods because they are rigorously tested. David Aaron of the U.S. Commerce Department recently told the Senate Finance Committee that ''13 years of U.S. experience with biotech products have produced no evidence of food safety risks; not one rash, not one cough, not one sore throat, not one headache.''

More recently, a panel of entomology experts has questioned the only seemingly legitimate environmental issue raised to date—the alleged threat to Monarch butterflies.

Yet activists continue to look for a new cause, a new evil in this technology. While these well-fed folks jet around the world plotting ways to disrupt the technology, they cannot or will not see the conditions of millions who are at grave risk of starvation. Activists resist development of longer-lasting fruits and vegetables, at the expense of Third World people who have no refrigeration to preserve their foods.

Critics of biotechnology invoke the trite argument that the shortage of food is caused by unequal distribution. There's plenty of food, they declare, we just need to distribute it evenly. That's like saying there is plenty of money in the world so let's just solve the problem of poverty in Ethiopia by redistributing the wealth of Switzerland (or maybe the United Kingdom, where the heir to the throne is particularly opposed to companies ''playing God'' with biotechnology).

The development of local and regional agriculture is the key to addressing both hunger and low income. Genetically improved food is ''scale neutral,'' in that a poor rice farmer with one acre in Bangladesh can benefit as much as a large farmer in California. And he doesn't have to learn a sophisticated new system; he only has to plant a seed. New rice strains being developed through biotechnology can increase yields by 30 to 40 percent. Another rice strain has the potential to prevent blindness in millions of children whose diets are deficient in Vitamin A.

Edible vaccines, delivered in locally grown crops, could do more to eliminate disease than the Red Cross, missionaries and U.N. task forces combined, at a fraction of the cost.

These are some of the benefits that the Church of England saw when church leaders recently issued a position statement on ''playing God'' through biotechnology: ''Human discovery and invention can be thought of as resulting from the exercise of God-given powers of mind and reason; in this respect, genetic engineering does not seem very different from other forms of scientific advance.''

More recently, the Vatican director on bioethics, Bishop Elio Sgreccia, criticized the ''catastrophic sensationalism with which the press reports on biotechnology'' and he rejected the ''idea of conceiving scientific progress as something that should be feared.''

So, if scientists who are developing biotechnology are not ''playing God'' in the eyes of these religious leaders, what are we to think of self-appointed guardians who would deny its benefits to those who need it most? We have the means to end hunger on this planet and to feed the world's 6 billion—or even 9 billion—people. For the well-fed to spearhead fear-based campaigns and suppress research for ideological and pseudo-science reasons is irresponsible and immoral.

[From the Los Angeles Times, Nov. 1, 1999]

(By Martina McGloughlin)

COMMENTARY; WITHOUT BIOTECHNOLOGY, WE'LL STARVE; AGRICULTURE: GENETIC ENGINEERING IS SUBJECT TO MORE SAFEGUARDS THAN MANY UNALTERED FOODS WE EAT

I agree with Greenpeace that we need to feed and clothe the world's people while minimizing the impact of agriculture on the environment. But the human population continues to grow, while arable land is a finite quantity. So unless we will accept starvation or placing parks and the Amazon Basin under the plow, there really is no alternative to applying biotechnology to agriculture.

Today's biotechnology differs significantly from previous agriculture technologies. Using genetic engineering, scientists can enhance the nutritional content, vitamins, minerals, antioxidants, texture, color, flavor, growing season, yield, disease resistance and other properties of production crops. Engineered microbes and enzymes produced using recombinant DNA methods are used in many aspects of food production. The cheese and bread you eat and the detergent you use to clean your clothes all have used engineered enzymes since the early part of this decade.

By reducing dependency on chemicals and tillage through the development of natural fertilizers and of pest-resistant plants, biotechnology has the potential to conserve natural resources, prevent soil erosion and improve environmental quality. Strains of microorganisms could increase the efficiency, capacity and variety of waste treatment. Bioprocessing using engineered microbes offers new ways to use renewable resources for materials and fuel.

Biotechnology is, in fact, the low-risk alternative to current practices. Take pest control. The economic and environmental costs of using existing methods are well known. But many of us are not aware of the potential costs of not controlling pests. Not controlling fungal disease in plants, for example, allows them to generate deadly toxins such as aflatoxin and fumonisin, which have been found, among other things, to cause brain tumors in horses and liver cancer in children.

The most cost-effective and environmentally sound general method for controlling pests and disease is the use of DNA. This approach already has led to a reduction in the use of sprayed chemical insecticides. According to the National Agricultural Statistics Service, 2 million fewer pounds of insecticide were used in 1998 to control bollworm

and budworm than were used in 1995, before ''Bt'' cotton was introduced. And the Bt gene—introduced into the crop plant, not sprayed into the atmosphere—is present in minute amounts and spares beneficial insects.

There is no evidence that recombinant DNA techniques or rDNA-modified organisms pose any unique or unforeseen environmental or health hazards. In fact, a National Research Council study found that ''as the molecular methods are more specific, users of these methods will be more certain about the traits they introduce into plants.'' Greater certainty means greater precision and safety. The subtly altered products on our plates have been put through more thorough testing than any conventional food ever has been subjected to. Many of our daily staples would be banned if subjected to the same rigorous standards. Potatoes and tomatoes contain toxic glycoalkaloids, which have been linked to spina bifida. Kidney beans contain phytohaemagglutinin and are poisonous if undercooked. Dozens of people die each year from cynaogenic glycosides from peach seeds. Yet none of those are labled as potentially dangerous.

Million of people have eaten the products of genetic engineering and no adverse effects have been demonstrated. The proper balance of safety testing between companies and the government is a legitimate area for further debate. So are environmental safeguards. But the purpose of such debate should be to improve biotech research and enhance its benefits to society, not stop it in its tracks.

[From the New Scientist, Dec. 25, 1999]

DR TRUTH

(By Michael Bond)

You come from a family of loggers. How did they take to you becoming an environmentalist?

My dad was one of our biggest supporters when we started Greenpeace in the early 1970s. With the US nuclear tests in Alaska there was a possibility that the hydrogen bombs would trigger an earthquake that would, in turn, trigger a tsunami. A very serious one during the Alaska earthquake of 1964 severely affected by father's business. Environmentalism then did not involve bashing loggers. We were concerned about all-out nuclear war and it blows my mind sometimes to see the movement behaving the same way about forestry that it did about nuclear war. I think they've got their priorities a bit mixed up.

What were those early days of Greenpeace like?

They were heady—there was huge camaraderie. We used to sing all the time. We always had a couple of people with a guitar. We were together for weeks on end on many of those expeditions into the Pacific and out to Newfoundland. We always had songs, such as: ''If mankind was created a step below the angels, the whales I'm sure were somewhere in between.'' They were wonderful songs. We really had a wonderful time. We always thought that a revolution should be a celebration. We tried to avoid the hair-shirt mentality that tends to creep in with self-righteousness, dogmatism and that short of thing.

As an ecologist with a PhD in the subject, were you a rare breed in the organization?

I was somewhat rare and had to live with the fact throughout my time in Greenpeace that there was a lot of disrespect for my science. That is why they called me Dr Truth. It was kind of a put-down.

As Greenpeace became bigger, richer and more famous did its priorities or principles change?

The best thing is that Greenpeace has remained faithful to the peaceful civil disobedience theme. In other words, the ''peace'' in Greenpeace is still the main principle. I think that's excellent. I do think though that they have diversified into so many issues, many of which are questionable in terms of priorities and some of which are just plain wrong-headed. A case in point is GM foods. If they are really so worried about human health, why don't they tackle tobacco?

Few scientists become radical environmental activists. What lit the spark with you?

It was partly my professors. The most important was Vladimir Krajina, a Czech forest ecologist. I used to think that science was just about technology. But after studying with Krajina, the light suddenly went on and I realized that the mystery of nature could be approached through science and ecology. The political part came while I was writing my thesis on pollution control in 1972. A very large copper-mining project was applying to dump its tailings into the sea. It was very close to my boyhood home at Winter Harbour in Vancouver Island, Canada. I chose to study not just the environmental impact of the tailings disposal, but the system that granted permits for the process. I soon learned that this was immune to truth.

Why after 15 years of activism did you start to become disenchanted with the environmental movement?

Partly it was the fact that foot soldiers often become diplomats. I don't think anybody should be required to be in confrontational environmental politics for their whole lives, especially when they start a family. But it was partly the movement's refusal to evolve. I'm in favour of civil disobedience in order to bring about justice where something really bad is going on such as nuclear testing or toxic dumping. But I'm a Gandhian through and through—I believe that peaceful civil disobedience and passive resistance movements are great shapers of social change. But when industry and government agree that the environment needs to be taken into account in policy making, and when there are ministries and vice-presidents of the environment, it seems to me it would be a good idea to work with them. When a majority of people decide to agree with you, it is time to stop hitting them over the head.

How has the environmental movement got it so wrong?

The environmental movement abandoned science and logic somewhere in the mid-1980s, just as mainstream society was adopting all the more reasonable items on the environmental agenda. This was because many environmentalists couldn't make the transition from confrontation to consensus, and could not get out of adversarial politics. This particularly applies to political activists who were using environmental rhetoric to cover up agendas that had more to do with class warfare and anti-corporatism than they did with the actual science of the environment. To stay in an adversarial role, those people had to adopt ever more extreme positions because all the reasonable ones were being accepted.

But hasn't environmentalism always been about opposing the establishment?

Environmentalism was always anti-establishment, but in the early days of Greenpeace we did not characterize ourselves as left wing. That happened after the fall of the Berlin wall when a whole bunch of left wing activists, who no longer had any role in the peace, women's or labour movements, joined us. I would go to the Greenpeace Toronto office and there would be an awful lot of young people wearing army fatigues and red berets in there.

Environmentalists recoil with horror when they hear you say that harvesting trees for paper or fuel benefits plants and wildlife. What's your evidence?

The environmental movement is essentially anti-forestry. Young people are being convinced to stop using trees to make paper and use environmentally appropriate alternative fibres, such as hemp and cotton. Now where are you going to grow those exotic farm crops? You are going to grow them where you have been growing trees for 20 years, where an environment exists for bugs, birds, squirrels and other wildlife. That environment will be destroyed if you clear a forest to grow a farm crop.

Does this mean that even clear-cutting is not as damaging as we've been led to believe?

Forests are resilient. They can grow back from total volcanic destruction, ice ages, fires, storms, whatever. You can take heavy equipment and bulldoze the soil right down to bedrock over a huge area, and if you go away and come back 100 years later you will have a new forest starting to grow back. Just logging the trees is not going to irreversibly destroy the ecosystem. In addition, I believe it is possible to sustain the biodiversity of a forest while removing large quantities of timber.

Surely you're not saying that logging has no impact on biodiversity?

Logging is never going to have zero impact. But its aim should be to maintain viable populations of all those species that were on that site to begin with. So you plan your forestry in such a way to ensure that there is a suitable habitat for every one of those species somewhere all of the time. For example, when you clear-cut an area, you are going to remove a lot of the shrubs, with means that shrub-nesting birds not do well there for a while. But as long as you have a place that was logged ten years ago somewhere hereby where the shrub layer has been able to replace itself, the birds will not mind if there are no trees.

Green groups ware that logging is threatening some animals with extinction. Are you telling me they're wrong?

In 1996 the World Wide Fund for Nature (WWF) announced that 50,000 species are going extinct each year due to human activity. And the main cause, they said, is commercial logging. The story was carried around the world, and hundreds of millions of people cam to believe that forestry is the main cause of species extinction. During the past three years I've asked the WWF on many occasions to provide me with a list of some of the species that have supposedly become extinct due to logging. They have not offered up a single example as evidence. In fact, to the best of our scientific knowledge, no species has become extinct in North America due to forestry.

You may disagree with the green groups, but would you still describe yourself as an environmentalist?

James Lovelock is my hero and I believe in the Gaia hypothesis that all life is one living breathing being, I don't see any reason to damage it more than necessary. I believe in gardening the Earth, but there should be lots of places left wild. The ''hands off'' attitude doesn't work with 6 billion humans needing things from Earth every day.

Why do you oppose the campaign against genetically modified crops?

I believe we are entering an era now where pagan beliefs and junk science are influencing public policy. GM foods and forestry are both good examples where policy is being influenced by arguments that have no basis in fact or logic. Certainly, biotechnology needs to be done very carefully. But GM crops are in the same category as oestrogen-mimicking compounds and pesticide residues. They are seen as an invisible force that will kill us all in our sleep or turn us all into

mutants. It is preying on people's fear of the unknown.

What does the future hold for the environmental movement?

We need to get out of the adversarial approach. People who base their opinion on science and reason and who are politically centrist need to take the movement back from the extremists who have hijacked it, often to further agendas that have nothing to do with ecology. It is important to remember that the environmental movement is only 30 years old. All movements to go through some mucky periods. But environmentalism has become codified to such an extent that if you disagree with a single word, then you are apparently not an environmentalist. Rational discord is being discouraged. It has too many of the hallmarks of the Hitler youth, or the religious right.

Crops modified by molecular and cellular methods should pose risks no different from those modified by classical genetic methods for similar traits. As the molecular methods are more specific, users of these methods will be more certain about the traits they introduce into plants.—National Research Council.

America leads the world in agricultural products developed with biotechnology. These products hold great promise and will unlock benefits for consumers, producers and the environment at home and around the world. We are committed to ensuring the safety of our food and environment through strong and transparent science-based domestic regulatory systems.—President William J. Clinton, statement on World Trade Organization objectives October 13, 1999.

January 13, 2000.

Hon. CHRISTOPHER S. BOND,
U.S. Senate,
Washington, DC.

DEAR SENATOR BOND: The undersigned scientists support the use of biotechnology as a research tool in the development and production of agricultural and food products. We also strongly advocate the use of sound science as the basis for regulatory and political decisions pertaining to biotechnology.

Biotechnology for agriculture and the food industry is offering remarkable innovations—providing new tools for growth and development. Biotechnology has a long history of development. Its early applications produced better quality medicines and improved industrial products. Recently, products have been developed that allow farmers to reduce their input costs and increase yields while providing environmental benefits. In the near future, an ever-increasing number and variety of crops with traits beneficial to consumers will reach the market. Such traits will include improved nutritional values, healthier oils, increased vitamin content, better flavor, and longer shelf life.

The ultimate beneficiaries of technological innovation have always been consumers, both in the United States and aboard. In developing countries, biotechnological advances will provide means to overcome vitamin deficiencies, to supply vaccines for killer diseases like cholera and malaria, to increase production and protect fragile natural resources, and to grow crops under normally unfavorable conditions.

We recognize that no technology is without risks. At the same time, we have confidence in the current U.S. regulatory system provided by the USDA, EPA, and FDA. The U.S. system has worked well and continues to evolve as scientific advancements are achieved.

Considering the tremendous potential of this technology, we urge policy makers to base their decisions on sound scientific evidence.

BANKRUPTCY REFORM ACT OF 1999—Continued

AMENDMENTS NOS. 2651 AND 2517, AS MODIFIED

The PRESIDING OFFICER. The Senator from Iowa.

Mr. GRASSLEY. Madam President, I would like to clear some amendments. Senator LEAHY is ready to do this. I ask unanimous consent that amendments Nos. 2651 and 2517, both of which have been modified, be adopted en bloc in their modified form and that the motion to reconsider be laid upon the table.

The PRESIDING OFFICER. Is there objection?

Mr. LEAHY. Madam President, I have no objection. I note that this makes 39 amendments the distinguished chairman and those of us on this side have been able to clear.

Mr. GRASSLEY. Yes. We now only have 9 amendments remaining from the 200 or 300 we started with back in late October. That is quite an accomplishment, and I thank the Senator for his cooperation.

The PRESIDING OFFICER. The amendments are agreed to.

The amendments (Nos. 2651 and 2517), as modified, were agreed to, as follows:

AMENDMENT NO. 2651

At the appropriate place in the bill, insert the following new section:

SEC. . PROPERTY NO LONGER SUBJECT TO REDEMPTION.

(a) Section 541(b) of title 11 of the United States Code is amended by adding at the end the following—

''(6) any interest of the debtor in property where the debtor pledged or sold tangible personal property (other than securities or written or printed evidences of indebtedness or title) as collateral for a loan or advance of money, where—

''(a) the tangible personal property is in the possession of the pledgee or transferee;

''(b) the debtor has no obligation to repay the money, redeem the collateral, or buy back the property at a stipulated price, and

''(c) neither the debtor nor the trustee have exercised any right to redeem provided under the contract or state law in a timely manner as provided under state law and Section 108(b) of this title.''

AMENDMENT NO. 2517

At the appropriate place insert the following:

SEC. . AVAILABILITY OF TOLL-FREE ACCESS TO INFORMATION.

Section 127(b)(11) of the Truth in Lending Act (15 U.S.C. 1637(b)), added by this Act, is amended by adding at the end the following:

''(K) A creditor that maintains a toll-free telephone number for the purpose of providing customers with the actual number of months that it will take to repay an outstanding balance shall include the following statement on each billing statement: 'Making only the minimum payment will increase the interest you pay and the time it takes to repay your balance. For more information, call this toll-free number: _____.'.''.

Mr. LEAHY. Madam President, I say further to my good friend from Iowa, we have served here for decades together. We were faced with what looked to be an impossible task when it began because of the number of amendments. I note for the record that the distinguished Senator dealt with this side in good faith. We were able, as a result, I think, to put the Senate in a position now where we are within range of being able to have a final vote, and the Senate will work its will either for or against the bill. We will actually be able to do that. It is because Senators on both sides of the aisle dealt with each other in good faith and got rid of a lot of amendments that we knew would go nowhere anyway. The Senator from Iowa and I have been able to accept 39 amendments. I think that is good progress, and I extend my appreciation to him.

Mr. GRASSLEY. I thank the Senator from Vermont and yield the floor.

The PRESIDING OFFICER. The Senator from Pennsylvania.

MEASURE READ THE FIRST TIME

Mr. SPECTER. Madam President, I send a bill to the desk regarding citizenship for Mr. Yongyi Song and ask for its first reading.

The PRESIDING OFFICER. The clerk will report.

The assistant legislative clerk read as follows:

A bill (S. 2006) for the relief of Yongyi Song.

Mr. SPECTER. Madam President, I ask for a second reading and object to my own request.

The PRESIDING OFFICER. Objection is heard.

Mr. SPECTER. Madam President, the procedure on the bill is, under rule XIV, to hold the bill at the desk.

Madam President, I ask unanimous consent that I may speak for up to 15 minutes as in morning business.

The PRESIDING OFFICER. Without objection, it is so ordered.

(The remarks of Mr. SPECTER pertaining to the submission S. 2006 are printed in today's RECORD under ''Submission of Concurrent and Senate Resolutions.'')

Mr. SPECTER. Madam President, how much time remains of my 15 minutes?

The PRESIDING OFFICER. Nine minutes.

TRIPS MADE OVER THE RECESS PERIOD

Mr. SPECTER. Madam President, I will comment briefly about two trips I made over the recess.

On December 17, 18, and 19, I traveled to Key West, FL, to observe Coast Guard operations and drug interdiction, and then on to Panama to see the immediate impact of the turnover of the canal to the Panamanian Government, and then on to Colombia, where I had an opportunity to visit with