

EIR Science & Technology

Methyl bromide ban will hasten world depopulation

The Montreal Protocol group that fashioned the excuses to ban CFCs met in Copenhagen to ban another crucial compound—and millions will pay with their lives. Rogelio A. Maduro reports.

Unbeknownst to the majority of its intended victims, the malthusian goal of dramatically reducing the world's population got a major boost at the end of November. From Nov. 17 to Nov. 25, representatives of 87 nations met to sign a new set of amendments to the Montreal Protocol Treaty. Invoking the pseudo-scientific conjecture that the ozone layer is being depleted by man-made chemicals, these representatives are expected to cave in to the demands of the environmental lobby and their powerful backers among the blue-blood oligarchical families of the West to speed up the timetable for elimination of chemicals crucial for human life. It is expected that the ban on chlorofluorocarbons (CFCs), the gas used in refrigeration; methyl chloride, a widely used pesticide in agriculture and food storage; halons, a fire-extinguishing gas; and carbon tetrachloride, will be moved up to 1995 from the phaseout dates determined in the 1990 London Conference. On top of that, the Copenhagen meeting is also expected to draft a ban on the production of methyl bromide by 1995.

According to Mostafa K. Tolba, executive director of the United Nations Environment Program (UNEP), "The targets set by the Montreal Protocol in 1987 and by the London Amendment in 1990 strike us today as far too leisurely a pace."

During the week before the high-level session there were two preparatory meetings: The Open-Ended Working Group

convened on Nov. 17-18, and the Preparatory Meeting of the Parties took place on Nov. 19-21.

Not content with banning the further production of these useful chemicals, another objective of environmentalists running the Copenhagen meeting was to set up a mechanism to destroy the existing stocks of CFCs and other halogenated compounds. (The halogens are the elements in the seventh column of the Periodic Table: fluorine, chlorine, bromine, and iodine.) A Technical Advisory Committee on Destruction Technologies has already recommended six methods for destroying these chemicals.

What is being banned are the chemicals that maintain human life on Earth at present levels of population and living standards. CFCs are critical in food refrigeration; carbon tetrachlorides are the feedstock for solvents, pharmaceuticals, pesticides, and fertilizers; methyl bromide is the most important insecticide and fumigant in the world today. The elimination of these chemicals will ensure the destruction of a large percentage of the world's food supply, through both spoilage and insect infestation. Billions of people will suffer the consequences of this ban: reduced or nonexistent food supplies and increased food contamination. It is expected that the ban of CFCs will cost the lives of 20 to 40 million people. The ban on methyl bromide may kill between 13 and 35 million people per year.

The most cruel aspect of this issue is the fact that the

entire ozone depletion scare is a scientific fraud. This topic has been dealt with in great detail in the book which this reporter co-authored with Ralf Schauerhammer, *The Holes in the Ozone Scare: The Scientific Evidence that the Sky Isn't Falling* (Washington, D.C.: 21st Century Science Associates, 1992). The present report will address the specific issue of methyl bromide, because at the time our book was written, methyl bromide was not even considered an ozone depleter.

What it is, and what it does

Methyl bromide, a compound produced naturally by many living organisms, especially marine algae, was introduced as an agricultural chemical in 1932. It was initially used as a very effective insecticide, and as time went by more and more uses were discovered. Today it is known as a versatile, highly effective, fast-acting fumigant. Its three main uses are for soil fumigation, fumigation of commodities, and structural fumigation.

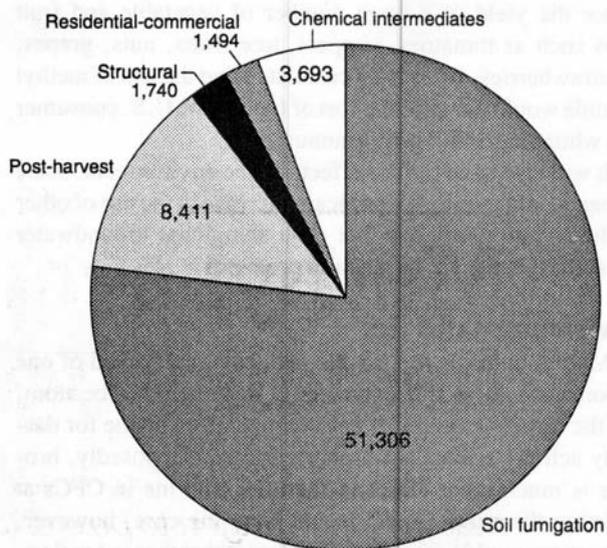
As a soil fumigant, methyl bromide is used to protect crops against nematodes (a family of worms that are parasitical to plants and animals, such as hookworms and pinworms), toxic molds and other fungi, and other pests and diseases. It performs these functions without contaminating groundwater, and it can improve yields of certain crops by up to 500%. As a soil fumigant it is currently vital to the economic viability of several agricultural products, including tomatoes, strawberries, peppers, eggplants, tobacco, flowers and ornamental plants, nursery stock, vines and turf. It is injected as a liquid to a soil depth of 8 to 12 inches, at which time it rapidly volatilizes into a gas and permeates open pore spaces into surrounding soil (see **Figure 1**).

In developed countries, soil fumigation with methyl bromide is commonly used against pests in highly intensive farming and on high-value commercial crops in warm climates or in areas where nematodes and other soil pests pose a significant problem. In developing countries, soil fumigation is primarily used for high-value export crops.

Methyl bromide is used for commodity protection and for quarantine treatment of a large number of commodities in international trade. Many developing countries are particularly dependent on the export of products currently fumigated with methyl bromide either before shipment or at ports-of-entry in developed countries. Methyl bromide fumigation is required in the U.S. on virtually all imports of fruits and vegetables, in order to prevent the introduction of destructive pests into previously uninfested areas. The banning of methyl bromide will allow the spread of devastating pests such as the giant Italian land snail, the Khapra beetle, and the Asian tiger mosquito into new uninfested areas.

The compound is also widely used as a fumigant to treat dried foodstuffs and stored grains, including wheat, rye, barley, and rice. In this application, methyl bromide acts to inhibit the growth of toxic molds and other fungi, nematodes,

FIGURE 1
Methyl bromide, U.S. use by category (1990)
(metric tons)



and other pests.

Methyl bromide has a plethora of other uses. Those include its use as a herbicide, preventing the growth of certain weeds in the agricultural field, a refrigerant, an effective fire-fighting chemical, a low-boiling solvent in dye manufacturing, a dry-cleaning agent for degreasing wool, and a medium for extracting oil from nuts, seeds, and flowers. If all that were not enough, methyl bromide is also used in the medical field as a methylating agent, as an intermediate chemical agent used in the manufacture of many valuable and life-saving pharmaceuticals, and under certain circumstances it is used in ionizing chambers to sterilize medical instruments.

As revealed at a Nov. 12 press conference by William Reilly, head of the U.S. Environmental Protection Agency (EPA), and a second one the same day given by a gaggle of environmental groups led by the Natural Resources Defense Council (NRDC), they have not bothered to study the consequences for the world's food supply (see box). And commercially viable alternatives are not available. That is a lie, however. The fact is that for the broad spectrum of applications in which it is currently used, there is no single alternative to or substitute for methyl bromide. There are a few chemicals and alternative procedures that can replace it for certain specific applications, but many farmers, for example, would be bankrupted by a ban on its use.

The availability of the compound influences the quality of the economic, environmental and public health of every citizen of the world.

The reality is that banning methyl bromide will cause a

tremendous deterioration in the public health of society, create significant harm to a wide variety of agricultural enterprises, and lead to enormous rates of hunger and starvation throughout the world. Among its many adverse effects, a ban would reduce the yield of a large number of vegetable and fruit crops such as tomatoes, peppers, tree fruits, nuts, grapes, and strawberries. It has been calculated that the ban of methyl bromide would increase the cost of food to the U.S. consumer by a whopping \$46.7 billion annually.

It will also have serious effects on the environment, since the ban would require a significant increase in the use of other fertilizers and pesticides that pose significant groundwater and surface water contamination problems.

Environmentalist lies

Methyl bromide is a simple molecule, composed of one carbon atom, three hydrogen atoms, and one bromine atom. It is the bromine atom that environmentalists blame for dastardly actions against atmospheric ozone. Supposedly, bromine is much more effective than the chlorine in CFCs at depleting the ozone layer. If that were the case, however, then nature would be suicidal. The fact is that the vast majority of the bromine present in the atmosphere is produced by natural sources. Bromine is a common element in seawater (65 parts per million) and potassium salts, and also has been

detected in some freshwater systems such as swamps and peat bogs. Most methyl bromide is contributed by marine algae.

One of the most interesting facts of this scandal is that methyl bromide was not even considered an ozone depleter a year and a half ago. It has gone from being a chemical that posed no threat to the ozone layer, to a chemical that allegedly accounts for between 10 and 20% of ozone depletion. There is something clearly wrong here.

The first time methyl bromide was even mentioned as an ozone depleter was in a report issued by the United Nations Environment Program (UNEP) at the end of last year. Most amazing, the subject of methyl bromide was not even discussed during the UNEP meeting which was the basis for the report. Essentially, methyl bromide appeared out of nowhere in the report, and while the report's assertions had not even been peer-reviewed by scientists before publication.

As if on cue, however, the Natural Resources Defense Council (NRDC), the Environmental Defense Fund (EDF), and the Friends of the Earth (FOE), came out with a report on Dec. 3, 1991, calling for a total ban on methyl bromide by 1993. Of great interest is the fact that the report was presented at the International CFC and Halon Alternatives Conference in Baltimore, Maryland on Dec. 5: The presentation of this radical environmentalist report had the support of

EPA challenged about methyl bromide lies

Leading environmentalist organizations and the U.S. Environmental Protection Agency Administrator William K. Reilly held back-to-back press conferences on Nov. 12 on accelerating the timetable for a worldwide ban on methyl bromide. A reporter from *21st Century Science & Technology* temporarily broke through their controlled environment by asking two simple questions:

1) Given that the worst-case scenario for ozone depletion is a 5% reduction in global ozone within 60 to 75 years—that is, the equivalent in increased ultraviolet exposure of moving from Washington, D.C. to Richmond, Virginia—how can you justify risking the entire world's food supply in a time of worldwide hunger and starvation, for no proven gain?

2) Did anyone in the preparation of your position papers calculate the losses to the world food supplies from banning methyl bromide? Preliminary calculations by *21st Century* staff show a cost of at least \$46

billion per year to the U.S. consumer and the loss of perhaps 5 to 10 million or more lives, mostly in the Third World nations.

Reilly feebly answered that his agency's "risk assessment" has determined that 70-90,000 deaths from skin cancers in the U.S. would be associated with the continued use of "ozone-depleting chemicals." It was pointed out to him, on dermatologic authority, that basal cell carcinoma (a skin disorder, not really a cancer) associated with over-exposure to UV radiation, is rarely life-threatening and is routinely treated in a doctor's office by a single application of a cotton swab soaked in liquid nitrogen. Malignant melanoma, which is a life-threatening skin cancer, has no proven association with UV exposure. Starvation, on the other hand, is deadly.

Reilly's answer to the second question was equally weak, bemoaning the difficulties the Third World faces in obtaining funding to phase out ozone-depleting chemicals. The *21st Century* reporter rejoined: "In other words, Mr. Reilly, the answer is 'no,' the U.S. government has not made any attempt to calculate the losses to world food supplies, yet you insist on speeding up the ban of methyl bromide."

The next questioner was called.

the Alliance for Responsible CFC Policy, an industry group representing producers and users of CFCs.

Shortly after the environmentalists' report was released, Eileen Claussen director of the EPA's Air and Radiation office, and Robert Watson, head of the Ozone Trends Panel, started a furious campaign to have methyl bromide banned right away. In essence they were trying to classify methyl bromide as a "Class I" ozone-depleting substance, which would mean it has to be banned on the same schedule as CFCs. Closely collaborating with Claussen and Watson were Susan Solomon from the National Oceanographic and Atmospheric Administration; Sherwood Rowland, one of the inventors of the ozone depletion theory; and several environmental bureaucrats led by Stephen Anderson and Stephen Seidel from EPA, and Stephen Lee-Bapty from the British Environment Office. These last three have become known as the "three Stephens of the Apocalypse" among scientists and industry people.

All has not been rosy for this crowd, however. They have encountered fierce opposition from industrial and scientific circles, and in a series of meetings it has been demonstrated that there is no scientific evidence to support a ban on methyl bromide. Furthermore, agricultural experts, including those from the U.S. Department of Agriculture, have been able to document in stark detail the terrible consequences of a ban on methyl bromide.

The question still remains, however, will the eco-fascist movement be able to implement a ban with the same impunity that they imposed a ban on CFCs?

The producers of CFCs, such as Du Pont, Allied Signal, Imperial Chemical Industries, and Hoechst, became staunch supporters of a ban on CFCs when they realized that they could make fabulous profits selling replacement chemicals. Trade associations not only did *not* fight the Montreal diktat, but the Alliance for Responsible CFC Policy, which was supposed to be defending use of CFCs, actively collaborated with the NRDC and other eco-fascist groups in promoting the ban of these useful chemicals. The leadership of trade associations, such as the American Society for Heating, Air Conditioning and Refrigeration (ASHRAE) and the Mobile Air Conditioning Society (MACS), actively promoted the Montreal Protocol and suppressed any evidence disproving the ozone depletion theory from their publications. This had a profound effect because the majority of the members of these organizations (including local leaders and chapters) opposed the ban, but did not have the tools—the truth about the ozone hole hoax—that would have allowed them to fight it.

In contrast to the treachery and surrender that surrounded the Montreal and London conferences, there is a very active opposition to the ban on methyl bromide being attempted at Copenhagen. Opponents include the companies that produce methyl bromide, which have formed the Methyl Bromide

Working Group to present the scientific truth to argue against a ban. Third World countries whose agricultural production and food supplies will be devastated by the ban are fiercely fighting against the heartless bureaucrats of the EPA and the United Nations Environment Program. Farmers, trade associations, and food retailers are up in arms. The ban is even being denounced by officials in the U.S. Department of Agriculture and elsewhere in the U.S. government, who have realized the consequences to the American economy, and human life, that this ban entails.

More than 40,000 copies of *The Holes in the Ozone Scare* have been sold in its English, German, and French editions. The book has been carefully read and studied all over the world, and the evidence it contains is being effectively presented to demonstrate that the ozone depletion arguments of the eco-fascists are a fraud.

There is little question that the eco-fascists will at least initially achieve a ban on methyl bromide. They have enormous financial power, control the regulatory apparatus of the U.S. government, and their great champion Albert Gore will soon be in the White House in the powerful position of vice president. Nevertheless, as the environmentalists will soon realize, they have made a strategic mistake. They have finally proposed to ban a chemical whose immediate effect on the food supply and the health and well-being of people is too great and too immediate to ignore.

Florida to be hard hit

Florida will be one of the hardest hit states by the methyl bromide ban. Here the chemical is used extensively under plastic mulch as a preplant soil fumigant, allowing increased production of many fruits and vegetable crops.

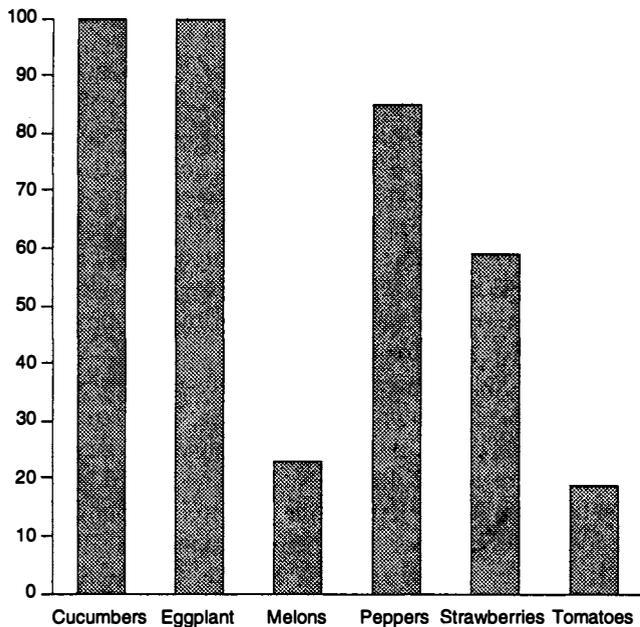
Meetings conducted in Florida, following the EPA announcement that it intends to ban methyl bromide, concluded that few economically viable alternatives exist. The only alternative (and not a very good one) to methyl bromide that was identified at one meeting was Vorlex, but, "It is not clear whether Vorlex will be available for future use because the manufacturer, Nor-Am Chemical Co., announced Nov. 11, 1991 that it was voluntarily canceling registration of both Vorlex and Vorlex 201."

The majority of the participants at a June meeting of the Methyl Bromide Working Group reported that if methyl bromide were to be canceled or placed in an accelerated phaseout program, the penalties, consequences, and losses could be staggering. It also was determined at that meeting that Florida will suffer more than other states or countries because of the heavy reliance on methyl bromide for multiple pest control in many of the high-value crops such as tomatoes, peppers, and strawberries (see **Figure 2**). Suspension of methyl bromide use will result in lower productivity and profitability within Florida's newly developing multiple-cropping systems.

FIGURE 2

Methyl bromide ban: Florida production loss in various crops

(percent of total crop)

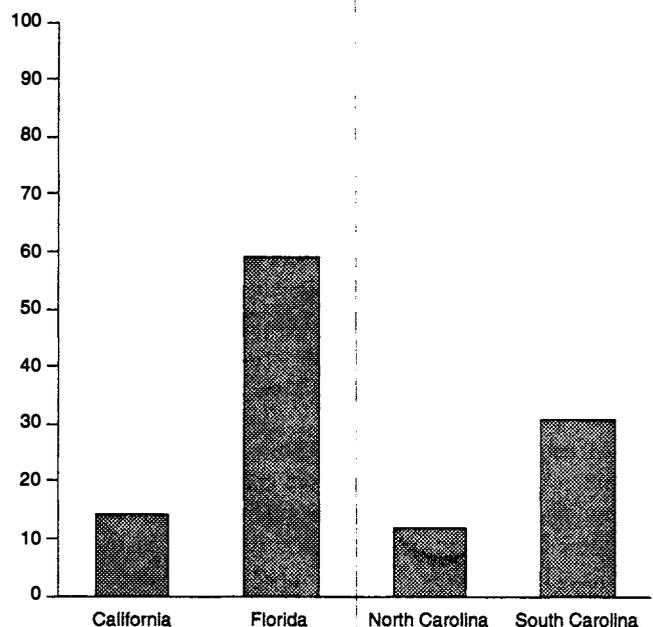


Source: USDA, "The Economic Effects of a Methyl Bromide Ban," September 1992.

FIGURE 3

Methyl bromide ban: production loss in strawberries

(percent of crop)



Source: USDA, "The Economic Effects of a Methyl Bromide Ban," September 1992.

This same conclusion was reached by a study conducted by the U.S. Department of Agriculture, "The Economic Effects of a Methyl Bromide Ban." This preliminary study assessed the short-term economic impact of using alternatives to methyl bromide in the production of 21 crops grown in California, Florida, Georgia, North Carolina, and South Carolina. As Figures 3 and 4 show, the yield losses will be very severe for certain crops, depending on the state. For Florida, just about the entire crop of cucumbers, eggplants, and peppers will be lost. And for the strawberry, the situation also looks bleak. Losses of strawberries range from 12% in North Carolina to 59% in Florida. Fresh tomatoes will also be decimated, with losses of up to 81% of the crop in North Carolina. These figures do not include the losses that will occur during storage and transportation as a result of pest and fungal infestation.

Alternatives in commodity fumigation

When methyl bromide is used on already harvested crops, it is known as a *commodity fumigant*. Due to the differences in target pests and types of commodities to be treated, no single alternative to methyl bromide is available for this use. The alternatives may require substantial capital investment

in facilities and process modification, and would often have to be approved by the importing country. All these steps would increase costs to the consumer. Pests associated with grains, legumes, nuts, dried fruits and vegetables, and other durable commodities can be fumigated with phosphine, when the adequate time/temperature combination can be achieved, and if residue levels are acceptable, according to government reports. When grain handlers are not pressed for time, fumigating with phosphine for four to six days is more cost effective than using methyl bromide.

Other alternatives which could be used for specific applications include modified atmosphere, biological control (parasites, predators, and pathogens), freezing, irradiation, cold storage, residual chemical treatment, and heat treatments.

Chain reaction effects of a ban

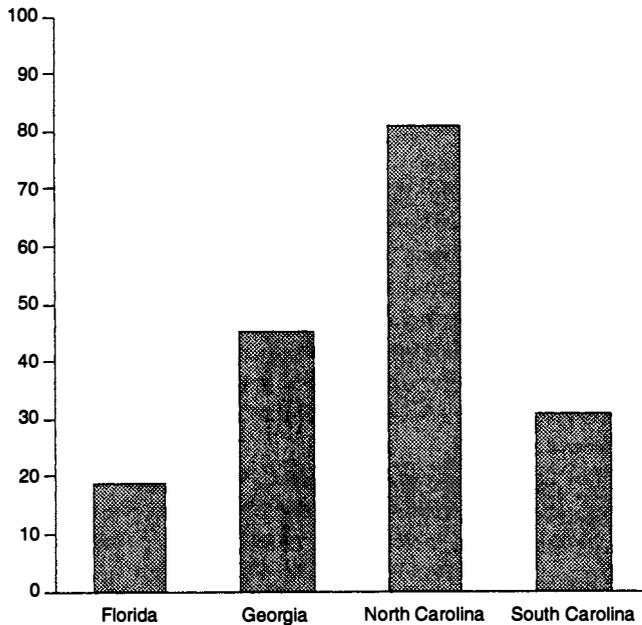
The ban on the use of methyl bromide as a fumigant is going to cause the loss of an enormous percentage of certain crops of fruits and vegetable. The loss of methyl bromide would:

- Reduce the yield of such crops as tomatoes, peppers, tree fruits, nuts, grapes and strawberries, raising the cost of food to the United States consumer an estimated \$46.638

FIGURE 4

Methyl bromide ban: production loss in fresh tomatoes

(percent of crop)



Source: USDA, "The Economic Effects of a Methyl Bromide Ban," September 1992.

billion per year.

- Require more land to be cultivated in order to meet world food demands. For example, the number of acres devoted to growing fresh market tomatoes in California alone would have to increase by 15% to 20%, from 38,000 to 45,600 acres, in order to maintain the same level of production. This increased cultivation would require a larger investment in land, more water (a rationed commodity in the agricultural states of California and Florida), more fertilizer, and more pesticides. A modest 5% increase in the land used to grow food crops in the United States would require adding 31 million acres to farms, and, at an average cost of \$638 per acre, cost an estimated \$10.435 billion.

- Disrupt the progress made by developing countries to diversify their agricultural base. For example, in Zimbabwe, root-galling nematodes (*Meloidygne spp.*) and subterranean cellulose-dependent termites prevent many plants from reaching harvest. The use of methyl bromide as a preplant soil fumigant is necessary as part of the rapid development of a successful horticultural export industry. The new crops—tomatoes, strawberries, Granadillas, hops, Proteas, cucumber, citrus and deciduous fruit, and Pyrethrum—challenge tobacco as the main cash crop in Zimbabwe. But a ban against

methyl bromide will doom the nation to return to its colonial status as a one-crop exporter.

- An ironic twist is that the ban on methyl bromide would severely hamper environmentalists' programs to reduce global warming. Replacement of trees is a major element of these programs, because trees absorb carbon dioxide. While there is no proof that global warming exists, there is no harm in proper forestry programs. However, a ban on methyl bromide would cause seedling loss of up to 40%, causing tree nurseries to double in size (from 35,000 to 70,000 acres) to maintain current bare-root seedling production; the cost of seedlings would more than double, from \$60 to \$120 per 1,000. The annual cost for the U.S. reforestation program would increase by a minimum of \$120 million per year. In addition, transplant loss would increase, requiring up to 30% more acreage to produce the same timber yield.

- Increase the level of salmonella and other deadly animal-borne contaminants in food (as well as the deadly mycotoxin-producing molds such as *Aspergillus flavus*).

- End the export of fresh fruits and vegetables from countries like Chile, disrupting national economies, producing widespread unemployment and political unrest. In Chile, 150,000 people (4% of the Chilean labor force) would be put out of work if exports of fresh fruits and vegetables were restricted. Chile would lose up to \$1 billion in foreign exchange income per year, representing 90% of the total value of Chile's export volume.

- Severely curtail the \$9 billion per year the U.S. earns in vegetable and fruits exports, costing jobs and increasing the U.S. balance-of-payments deficit.

- Allow the spread of pests such as the giant Italian land snail, Khapra beetle, and the Asian tiger mosquito into new areas, disrupting ecological systems (adding to the estimated 50,000 species per year that become extinct), destroying the farming practice of generations, and endangering public health.

- Stop the progress of the Integrated Pest Management Program (IPM), because the cornerstone of IPM is the prevention of new foreign pests. The rapid spread and devastating economic impact of the Russian wheat aphid and the sweet potato white fly are examples of what a new foreign pest can do in a short period of time; economic disaster. The eradication of imported pests, once they are established, is costly and requires the heavier and more widespread use of other pesticides. For example, the entry of the Khapra beetle into California in the late 1950s cost \$9 million to eradicate, and the 1989-91 California Mediterranean fruit fly eradication program cost \$66 million.

- End all trade from countries such as India and Pakistan, where the voracious and destructive Khapra beetle is found. Trade restrictions would devastate the economies of the countries bordering the Indian Ocean (where 25% of the world's people live), resulting in starvation, disease, and

political chaos. If food shortages caused an increase from the 1989 average death rate of 21 per 1,000 to only 22 per 1,000 population, this small rise would mean the deaths of an additional 1.5 million people per year in this region.

Use as a structural fumigant

Methyl bromide is used extensively as a structural fumigant, and this application currently accounts for about 5% of U.S. production (3,500 tons in 1990). The current use of methyl bromide as a structural fumigant is widespread because of its efficacy, applicability for a wide variety of sites and pests, suitability for use on accessible and inaccessible pests, short fumigation period (about one day), lack of insect resistance, cost effectiveness, and because it does not damage food, structures, or equipment if used correctly. There are at present no alternatives for a number of applications, including: pest control for some food-processing facilities, warehouses, aircraft, and historic buildings, as well as quarantine treatment of structures against exotic pests and diseases. Quarantine treatment of structures against exotic pests currently requires that all pest control options be available, including methyl bromide. Banning the compound would:

- Increase the cost of wood products and buildings, including repair and replacement. The total direct and indirect costs of wood damage and replacement would exceed \$132 million per year, and increase each succeeding year as damaging insect infestations spread and become established over the United States. The cost of each real estate transfer (closing costs) would increase by \$900 to \$1,200, reflecting the additional cost for termite control. In southern California alone this would represent an additional cost to homeowners of \$135 million to \$180 million per year. In addition, some priceless historical artifacts and structures would be lost. Because they can harbor dangerous exotic new pests, the importation of wicker, bamboo, and tropical woods into the United States as baskets, furniture, and decorative items would end.

- Result in food supplies that are less safe and less palatable, because no methods will be available to control pests such as larvae, roaches, and rats in flour mills and food production, storage, and transportation facilities. The public expects its food to be free of insect filth and rodent feces.

- Wipe out the world's stored grain reserves. Countries would no longer have the ability to store excess food production for use in years when production is low. Grain would have to be used immediately, or be lost to insects and rodents. The 20 million bushels of feed grain (corn) and the 147 million bushels of wheat held as a disaster reserve in the United States would be vulnerable to infestation by hitchhiking pests. The United States could be forced to become a produce-and-consume society, having lost its ability to feed itself during lean production years or disasters.

Hitler, too, was an environmentalist

We reprint here the opening remarks by Marjorie Mazel Hecht, managing editor of 21st Century Science & Technology magazine, to a Sept. 30 forum in Washington, D.C. aimed at debunking the ozone hole scare.

The forum was held to reach representatives of the air conditioning and refrigeration industry, gathered in convention at the time, after an anti-CFC group within the industry refused a challenge from 21st Century Science & Technology to debate the issue.

The fight to reverse the ban on CFCs and other so-called ozone-depleting chemicals escalated recently, when French volcanologist and former government minister Haroun Tazieff presented a statement to the Nov. 17-25 Copenhagen conference of the Parties to the Montreal Protocol. His statement, which is co-signed by over 100 scientists from 12 nations, is entitled "Seven Good Reasons to Reverse the Montreal Protocol." Copies of the statement were distributed to attendees at the Copenhagen meeting, and Tazieff's action was reported as front-page news in the French daily Le Figaro on Nov. 23.

*Tazieff wrote the foreword to the book *The Holes in the Ozone Scare*, published by 21st Century Science Associates, in which he presents a withering refutation of the ozone depletion theory, on which the international ban on production and use of CFCs, halons, and other allegedly ozone-depleting chemicals is based.*

We published *The Holes in the Ozone Scare* for one urgent reason: If CFCs are phased out as planned under the Montreal Protocol, it won't just cost consumers billions of dollars. People will die as a result, people will pay with their lives for the ozone scare. The estimate of the refrigeration industry is that 20 to 40 million people will die worldwide as a result of the disruption of the cold chain. But how many Americans know that? And how many so-called environmentalists think that these deaths are okay, because the world is overpopulated and they want us to get rid of some of the surplus?

Most Americans know only the scare story—that man-made CFCs are poking a hole in the ozone layer through which increased ultraviolet radiation will hit them and cause cancer. This scare story has been repeated so much in the media, that people don't question it. . . . Sen. Al Gore talks