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DONNER LABORATORY AND DONNER PAVILION

BERKELEY, CALIFORNIA 94720

February 9, 1970

The Directors of the Sierra Club

Gentlemen:

I understand that the Board of the Sierra Club has instituted legal action against the United States Department of Agriculture to prevent use of DDT on the basis that it may cause cancer. I believe that this claim is not true, and I have some reason for saying so because I have long studied the nature of cancer-causing circumstances, and I have a record for opposing the introduction of carcinogens into our environment.

A section of the Mrak report on pesticides has held that some pesticides, including DDT, may cause cancer. The cited evidence is merely that chronic toxic dosages of DDT applied to rodents cause liver enlargements with occasional showing of centers of nodular hypertrophy. Some pathologists have referred to these nodules as tumors, but even this mild confusion of a term within the terminology also applying to cancer is in error as evidenced by the fact that these nodules disappear when the rodents are freed from heavy DDT intake. Neoplastic nodules would not uniformly disappear in this way. The fact that the Mrak Commission created confusion is not an excuse for other groups to worsen the confusion. If the Sierra Club is to enter this area, I advise that the board should develop some basis of competence as a basis for actions taken.

I refer you to the attached letter to members of President Nixon's Cabinet. I hope you will read the letter. I have also tried to investigate more general arguments about disturbance of living forms, reproduction of wild life, etc., offered by those opposing pesticides. I conclude that the arguments are so incorrect that they would certainly obscure any accurate points for or against pesticides because the false arguments, being more spectacular, generate much emotional response.

The pesticide issue is important. The decisions about pesticide use will certainly affect the world's food supplies and the health and well-being of more than a billion persons. The Board has an obligation to get its facts straight and to form policy consistent with being an agent for rational conservation. .

Sincerely,

Hardin B. Jones

Hardin B. Jones
Professor of Medical Physics
and Physiology
Assistant Director, Donner Laboratory

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January 26, 1970

The Hon. Robert H. Finch, Secretary of Health, Education, and Welfare
The Hon. Clifford M. Hardin, Secretary of Agriculture
The Hon. Lee A. DuBridge, Scientific Advisor to President Nixon
Washington, D. C. 20201

Gentlemen:

I am an environmental physiologist. For many years, I have worked to identify environmental hazards and to urge their reduction. Now, however, I see a trend, promoted by a tide of publicity in all the news media, to exaggerate some of the alleged hazards and depart from the scientific objectivity on which sound judgments should be based. The subject of pesticides illustrates this process. I am writing to express my concern about the national consequences of the official Report of the Secretary's Commission on Pesticides (DHEW) and the resultant policies.

There is understandable concern about the fact that residues of many of these substances are measurable throughout the biosphere, but the effects on human health are made the subject of speculation in an unscientific way. Refinement of chemical methods has made it possible, for example, to measure the amounts of DDT in tissues at extremely low levels. The fact that no harmful effects have been observed in groups of persons who have ingested thousands of times as much is lightly brushed aside and replaced by speculation that is acknowledged to be incapable of proof or disproof. Since DDT has been most prominently in the public's attention, I shall focus on the treatment of that substance in the Report.

The Report makes no attempt to establish the importance of the use of DDT for human health; instead, it dwells on speculation about its hazards. The bare statement that environmental levels of DDT may be increasing, remaining constant, or decreasing disregards ample evidence that the observed levels represent transient fluctuations in a steady state of balance between applications and degradation of DDT. Enough time has elapsed since the beginning of the extensive use of this agent to demonstrate that there is not a steady accumulation of it. Yet the Report reflects the view that DDT is accumulating essentially everywhere.

There are frequent allusions to the lack of information about the degree of DDT contamination--a truly regrettable oversight--but this lack does not warrant the implication that degree of safety is unknown. Important observations, such as the study of the workmen in the DDT formulating plant, are dismissed as invalid on the erroneous assumption that the evidence for the lack of effect only applied to those who remained as employees to the end of the period. A key point of this important study is that the state of health of the entire population was accounted for over many years.

The Report neglects all evidence of safety of DDT when it is applied in the usual manner and recommends eliminating it from home use. The result is likely to be that children will be exposed to substitute pesticides having far greater hazards. Instead of noting that humans can safely ingest several grams of DDT in a single exposure (10,000 to 40,000 times more than the average daily intake) the Commission's Report

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makes a tone-setting statement without reference to the level of dosage to which it would apply (Report, pp.246-7): "In DDT we have a striking instance of acute effects directed towards the central nervous system, while long-term exposures involve the liver as a primary organ of attack." This alarming statement relates to the effects of continuous exposure of animals to doses which, in terms of body weight, are equivalent to more than 10 grams per day for an adult man. The statement is totally misleading in a context that relates to dose levels more than 10,000 times lower.

The Commission was, in my opinion, mistaken in attributing a carcinogenic risk to DDT. Attached is my analysis of the DDT test trials bearing on this question. I am resolutely against increasing the burden of carcinogens in our environment, but I do not believe there is any valid evidence to suggest that DDT is a carcinogen at any level. I suspect that the emotional drive against DDT had something to do with stretching the interpretation to make it appear to be damnable as a cancer hazard.

Before the Commission submitted its report, leaks to the press hinted that DDT was likely to be labeled a carcinogen. These news accounts also predicted that the Secretary would prohibit the use of DDT if it were found to be a carcinogen. Some of us who were professionally qualified to examine this point repeatedly attempted to reach the Commission's chairman after this press leak in order to discuss the evidence but were unable to do so. The Commission and the Secretary acted as predicted by the press. This action came at the very time that many of us were challenging the unsound contentions of the emotional opponents of DDT in legislative hearings.

The consequences of the Report are:

1) Under Government policy, the general use of DDT must be phased out over a period of two years. This policy will produce immediate pressure against any use of it, in spite of Recommendations 3 and 4 which allow for continued use of DDT when approved unanimously by the Secretaries of HEW, Agriculture, and Interior. These two recommendations can have no meaning or force unless steps are taken to clear up the scientific controversy about the evidence of DDT's safety.

2) The recommendations jeopardize legitimate application of DDT for uses in which there is no alternative pesticide.

3) The phase-out announced for DDT weakens the justification of use of all other pesticides. The opponents of pesticides recognize the leverage this gives them and several spokesmen have predicted that they will succeed in banning all pesticides.

4) The announced policy against DDT threatens to lead to withdrawal of our support of the anti-malarial and other anti-parasite programs in the emerging countries. Such a step would lose the good will we have been gaining there. These peoples are "emerging" from oppressive, maiming diseases transmitted by insects and lice, and they properly associate their rescue with DDT and the industrial-scientific development of the country which made DDT available to them. If DDT is withdrawn by us, other countries will supply it and gain the credit. On the other hand if our country continues supplying it without first subjecting the issue to thorough public review of the safety question and establishing the fact of safety, propagandists will say we are deliberately poisoning people by giving them cancer rather than giving real aid.

5) Although the Commission recommends (Recommendation #11) that we should "Provide incentives to industry to encourage the development of more specific pest control chemicals," the tone of the Report and the confusion created by its bias suggest that all chemical pesticides should be prohibited. When a remarkably safe compound such as DDT is falsely devaluated in spite of years of use and observations of safety, new

compounds are likely to be more suspect of hazard.

The emotional appeal associated with our interest in protecting our environment may lead to scientifically unjustified and socially and economically harmful demands... in the name of anti-pollution measures unless findings such as the Commission Report are subjected to adversary proceedings involving balanced groups of qualified witnesses. Such proceedings would assure consideration of all the facts and all the arguments, and would thereby offer a sound foundation for action by the Secretaries.

I have a more general concern that scientific research and its industrial applications, public or private, may be seriously dislocated by the anti-technology movements now spreading rapidly. Government leadership should give attention to corrective measures against this irrational, politicized action before science and industry are paralysed by emotional controversy. The splendid opportunity of the moment to gain popular support for a broad-based effort toward conservation of our natural resources and to clean our environment may well be lost in chaos without definite leadership from the top levels of government.

In writing to you, I feel that I am expressing the concern felt by many of my professional colleagues.

Respectfully,

Hardin B. Jones

Hardin B. Jones
Professor of Medical Physics and Physiology
Assistant Director, Donner Laboratory

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