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A PETITION

We the undersigned scholars of early Chinese history are gravely concerned by the appeal of the Russian Sinologist, Vitali Rubin.

As a result of his application (which has so far been rejected) to emigrate from the Soviet Union to Israel, he has apparently lost his job in the Institute of Oriental Studies of the Academy of Sciences in Moscow, his works have been withdrawn from print, and citations to his already published writing have been removed from works now in press. (See his letter to the *New York Review of Books*, October 5, 1972, p. 36.)

This refusal to let Vitali Rubin work or publish diminishes the scope of Chinese studies, not only in Soviet Russia, but throughout the world. No government should deny an internationally known scholar the right to choose where he will live and work.

In the interests of our profession, of academic freedom, and of human rights, we therefore petition the proper Soviet authorities to permit Vitali Rubin to resume his sinological studies, and emigrate if he so desires.

The 29th International Congress of Orientalists will be held in Paris in July, 1973. In the event that no satisfactory response to this petition has been received by that time, we are prepared to call for an enquiry into Vitali Rubin's situation, to determine the extent to which the Institute of Oriental Studies in Moscow is responsible for this deplorable violation of academic and human rights.

THE USE OF HERBICIDES FOR AGRICULTURAL PURPOSES

Mr. MONDALE. Mr. President, Senator NELSON has made an important environment statement concerning the use of herbicides for agricultural purposes. In his speech, he outlines the nature of some of the problems that arise in the use, overuse, misuse, or abuse of chemicals introduced into the marketplace without adequate studies on the question of safety and without any understanding of the environmental ramifications of their use.

Senator NELSON delivered his speech at the annual pesticide conference in Madison, Wis., where he also announced that the Environmental Protection Agency had informed him that they intend to cancel registration of the herbicide 2,4,5–T for rangeland use.

The herbicide 2,4,5-T was used extensively in Vietnam where millions of acres of forest and cropland were destroyed by defoliation. The Department of Defense terminated the use of 2,4,5-T after scientific tests confirmed its extreme toxic and teratogenic effects. And last August, Senator NELSON revealed that a Missouri helicopter firm had sprayed 2,4,5-T over about 1,000 acres of hillsides and bluffs along the Wisconsin River on the northern edge of Grant County, Wis.

Mr. President, I ask unanimous consent to have the full text of Senator NELSON's speech, "The Use of 2,4,5-T for Rangeland Management," and the letter concerning cancellation of 2,4,5–T, received from EPA dated January 11, 1973, be printed in the RECORD.

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

THE USE OF 2,4,5-T FOR RANGELAND MANAGEMENT

(Statement by Senator GAYLORD NELSON, Pesticide Conference—Madison, Wisconsin January 17, 1973)

The controversy over the use of 2,4,5-T represents both the typical and classic case concerning the public policy questions at issue whenever it is proposed to introduce a new and active agent into the marketplace. The issue is the same whether the products involved are pesticides, herbicides, food additives, prescription drugs or toxic substances produced or used in the industrial process. The major public questions raised involve such important matters as safety, efficacy and risk benefit ratio.

The dramatic proliferation of the use of these agents in foods, drugs, herbicides, pesticides and industrial production is a recent phemonenon. While it is certainly true that many of these agents have significantly, even spectacularly, improved health care, the preservation of food, agricultural production, and industrial production, it is also true that many of these agents are dangerous, useless, or both, and many other useful agents are widely misused or overused and present serious environmental and public health hazards.

While we have been prolific in the development, production and use of a multiplicity of potent "miracle" agents, we have been derelict in establishing a sound protocol for testing their safety and efficacy and controlling their use. It was not until 1938 that we passed legislation requiring scientific proof of safety for drugs and not until 1962 that we added the requirement of effectiveness. Legislation establishing genuinely effective controls over food additives, herbicides, pesticides and toxic substances has lagged far behind. Finally Congress has begun to recognize the problem and pass legislation establishing better standards of scientific proof for safety and efficacy as well as controls over marketing and use.

Everyone is aware of the controversy over the use of 2,4,5-T for pastureland improvement. The proponents of its use, including some scientists at the University of Wisconsin and elsewhere as well as the Sponsors of Science, Inc., take the position that 2,4,5-T has been adequately tested for safety and presents no problem from that standpoint. No one doubts that the proponents are conscientious and sincere and there is no quarrel over the objective of designing better techniques for pastureland improvement so long as they are environmentally sound.

Furthermore, no valid criticism lies against the farmers who have used 2,4,5–T. They after all, are entitled to rely upon the government to set the standards for safety, licensing and use.

Nevertheless, contrary to the position of the proponents it is quite clear that adequate safety studies have not been made on 2,4,5–T. This product contains dioxin, the most toxic synthetic agent known. Since it is present in only very, very small amounts this fact has induced considerable unjustified complacency about its use. It is also dangerous in very, very small amounts, both as a toxic and teratogenic agent.

Some information about its toxicity is relevant at this point.

Next to botulinum toxin, dioxin is the most toxic agent known to man. In laboratory tests, only 6 parts of dioxin per ten billion parts (bodyweight) was lethal.

The Science Policy Research Division of the Library of Congress made an extrapolation for us which showed that assuming a lethal dose in experimental animals is directly equivalent for man, then one medicine drop of dioxin would kill 1,200 people.

Not only is dioxin extraordinarily toxic, it is also teratogenic. Dr. Jacqueline Verrett of the Food and Drug Administration reports that in chick and mammaliam studies, dioxin is "some 100,000 to a million times more potent" than the tranquilizer thalidomide which caused a large number of birth defects in Europe.

Dr. Matthew Meselson, of Harvard, headed the Herbicide Assessment Commission of the American Association for the Advancement of Science. That Commission went to Vietnam to study the impact of defoliation which included the use of 2,4,5–T. Dr. Meselson has devoted the past several years to developing sophisticated methods for detecting dioxin. I spoke at length with Dr. Meselson. He stated that "because of the slow acting nature of the dioxin, because of the susceptibility of the young, I myself would consider that the traditional safety factor of 100 should be increased so that in my own opinion I would say that we should strive to have no more than one part per thousand billion of dioxin in our own bodies." "But I do believe," he said "that from a toxicological point of view that we have an unparalleled problem here. We've been a little bit hypnotized by hearing that there is no more than even a tenth of a part per million of dioxin in the current production batches of 2,4,5–T. We've been hypnotized into thinking that that must be negligible. And it is a welcome improvement, I'm sure. But I'm not at all sure it is negligible. It may, in fact, be quite serious."

Last year in a letter to William D. Ruckelshaus, Administrator of the Environmental Protection Agency, Dr. Meselson stated that ". . . there are simply no existing measurements showing that dioxin levels in human tissue and in the food chain in areas where 2,4,5–T has been used are below the levels that might constitute a public health hazard."

Proponents of this agent, nevertheless, assert that there are adequate scientific studies. The fatal flaw in the proponents assertion lies in the fact that questions remain to be answered in two major areas of concern. 1) We don't know the effect on living creatures of long-term, low level exposure of dioxin. And 2) we don't know whether bio-magnification occurs and if so, what is its significance.

Dr. Matthew Meselson has stated categorically that "there's no monitoring program anywhere in the world for dioxin in the tissues or in food."

And on the important question of bio-magnification, adequate studies have not been conducted. If bio-magnification does occur it presents a potential environmental and public health hazard of the first magnitude. Bio-magnification was one of the major problems involving DDT. What may have been an innocent amount of DDT at the beginning of the food chain increased geometrically up the food chain until it became a lethal concentration for some creatures at the end of the food chain.

In one 1966 University of Wisconsin study of DDE, the persisting environmental breakdown form of DDT, one part of the pesticide in the sediment of Lake Michigan multiplied to 40 times that amount in the body of small invertebrates. It jumped to 370 times that amount by the time it reached the alewives in the food chain. And at the end of the food chain, the herring gull contained 16 thousand times the amount of DDE that was originally found in the Lake's sediment.

Here is what the Herbicide Assessment Commission of the American Association for the Advancement of Science had to say on the question of the potential hazard of dioxin in 2,4,5-T:

Its potential importance lies in the fact that it is exceedingly toxic, may be quite stable in the environment, and being fat soluble, may be concentrated as it moves up the food chain into the human diet.

The National Science Foundation, the National Academy of Science, and the Library of Congress advise me that they are unaware of any adequate scientific studies on the question of biological magnification of dioxin.

The U.S. Department of Agriculture has recently made a preliminary study of biological accumulation of dioxin in an aquatic environment, which indicates that biological magnification does occur.

For emphasis I repeat that most of the tests that must be done before we know where we stand have not yet been done. There is *no* relevant information on dioxin in food and human tissue. There are *no* adequate studies on long-term toxicity even in lab animals. And there is only one preliminary study of bio-magnification and it shows that it *does* occur.

There is a very fundamental public policy issue at stake here which, it seems to me, we must confront headon. The issue is this: are we going to permit the widespread use of potent and toxic agents without requiriing prior adequate scientific safety tests? From the public interest standpoint, it seems to me there is no way to answer that question except in the affirmative. We have had ample tragic experience with the widespread use of potent agents without having required prior scientific studies.

My recommendation last fall that 2,4,5-T should be withheld from use until adequate safety studies have been performed has been widely criticized as irresponsible by proponents of its use. My conclusion was not based upon any independent scientific expertise of my own. I have no such credentials and claim none. It was based upon extensive exploration of this issue with distinguished scientists knowledgeable in the field.

You will be interested to know that the scientists at the United States Environmental Protection Agency have reached a conclusion exactly opopsite from that reached by those professors at the University who have been vocal in their criticism of my position.

The Environmental Protection Agency informed me last week that they intend to cancel the use of 2,4,5-T for rangeland purposes. They state that the cancellation would apply to the kind of pastureland treatment for which it has been used in Grant County. They advise me that:

"We have not been able to establish a finite tolerance for this use . . ."

That cancellation would go into effect this month except for an injunction issued against the Agency involving a lawsuit over an entirely different use of 2,4,5-T. However, the Environmental Protection Agency has advised my office that once that lawsuit is concluded and the injunction lifted they will cancel the use of 2,4,5-T for rangeland purposes.

It is instructive to note that the scientists at the Environmental Protection Agency after reviewing all the available scientific studies as well as all information supplied by the manufacturer concluded that there was not sufficient scientific evidence available to enable them to establish a safe tolerance level.

This is exactly the point at issue. This is what the controversy is all about.

Herbicides and pesticides are valuable and useful tools properly used, in proper amounts under appropriate circumstances. However, they cannot serve the best interests of the farmer, agriculture or the public if they are overused, misused or introduced into the marketplace without adequate studies on the question of safety and without any understanding of the environmental ramifications of their use.

Unfortunately we have not followed these sensible guidelines very well in the past. I would hope we would do better in the future.

When appropriate scientific studies have been made it may well be that a safety tolerance level can be established. If so, the EPA no doubt will authorize its use under proper standards and guidelines. If such safety tolerance levels cannot be established, obviously it should not be used.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Washington, D.C., January 11, 1973.

Senator GAYLORD NELSON,
U.S. Senate,
Washington, D.C.

DEAR SENATOR NELSON: This will confirm a telephone conference on January 5, 1973, between Miss Paula Stern of your office and Mr. Douglas Campt of this Agency regarding the herbicide 2,4,5-T. You will recall that at your request this Agency made available to your office last week certain information relating to the toxicity of this herbicide.

Miss Stern, in the telephone conversation with Mr. Campt, inquired as to whether certain feeding studies on the chemical were available. Mr. Campt responded that there are feeding studies that are a part of a petition for tolerance resulting from use of the chemical on range grass submitted by the Industry Task Force on Phenoxy Herbicides. We have been advised by our Office of the General Counsel that this information is not available since the Food, Drug and Cosmetic Act requires it to be held confidential until a regulation is issued.

Miss Stern then inquired as to the current status of the registration of 2,4,5-T on range grass. She was informed that the use is currently registered as a no-residue use; however, the phase-out of the "no residue zero tolerance" concept would require cancellation of registered products bearing this use unless finite tolerances are established. We have not been able to establish a finite tolerance for this use and registrations would be subject to cancellation during this month. However, our General Counsel has advised that U.S. District Court Judge Oren Harris' order enjoining the Agency from conducting hearings or dealing with any administrative proceeding concerning 2,4,5-T would preclude our taking cancellation action at this time.

We are enclosing for your information copies of PR Notices 70-29 and 72-4 in addition to a copy of the NAS-NRC report on "No Residue" and "Zero Tolerance" dated June 1965. These documents will give the background on the phase-out of "No Residue" uses.

Thank you for this opportunity to further clarify our position in this matter.

Sincerely yours,

GARY BAISE,
Director, Office of Legislation.

PLASTIC GARBAGE ON AN ALASKAN ISLAND

Mr. STEVENS. Mr. President, the March 30 issue of the U.S. Department of Commerce publication, NOAA Week, bannered a story "NMFS Finds Tons of Plastic Debris on Alaskan Island." It describes how plastic garbage—synthetic fish nets and ropes, gillnet floats, miscellaneous bits of trash—discarded and lost by foreign fishing fleets are floating in the waters, littering the beaches, injuring and killing the creatures of the North Pacific.

Ironically, the observations cited in the article were made at Amchitka Island, the scene in November of 1971 of controversial testing by the Atomic Energy Commission. Thousands of persons demonstrated their opposition because they were alarmed at serious damage they mistakenly thought the testing might cause the area's environment and its living creatures. Now it has come to pass that like damage has indeed been inflicted—by foreign fishing fleets. Apparently because this is less dramatic than a nuclear blast, the situation is continuing with little notice.

In view of the relative lack of concern over the existing situation at Amchitka, I ask unanimous consent to provide a measure of recognition by publication in the RECORD of the article from NOAA Week.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

NMFS FINDS TONS OF PLASTIC DEBRIS ON ALASKAN ISLAND

The National Marine Fisheries Service has found that thousands of pieces of plastic, ranging from tiny scraps to lengths of fishnet 100 feet long, litter Alaska's remote Amchitka Island beaches. The NMFS estimates that about 24,000 plastic items, including 12 tons of trawl web and perhaps 7,000 gillnet floats, have washed up along 60 miles of Amchitka beaches.

The estimate is based upon items found by NMFS during surveys of 6.2 miles of shore between last April and October to obtain information on the kinds and extent of plastics littering the beaches of the North Pacific Ocean and the Bering Sea. The surveys were incidental to other fisheries programs underway in the area.

This discovery comes on the heels of the announcement by NOAA in mid-February that oil globules and plastic debris in massive proportions were found in nearly 700,000 square miles of ocean water from Cape Cod to the Caribbean, becoming part of the habitat of countless numbers of prized game and commercial fish species.

That announcement was made following analysis of results of three cruises by NOAA vessels as part of the Marine Resources Monitoring, Assessment, and Prediction Program (MARMAP).

Most plastics are not readily biodegradable; that is, they do not break down into harmless components by biological action, so that once introduced into an environment they remain indefinitely.

Plastic garbage dumped into the world oceans has obvious physical effects on man and other creatures. Fishing vessels have been disabled when propellers were entangled in floating synthetic ropes and nets; diving sea birds and fish have been captured in scraps of netting; fur seals and other marine mammals are injured or drowned when caught in derelict nets; and some species of sea birds eat bits of floating plastic, presumably mistaking them for morsels of food.

Most of the contamination of Alaska waters by plastics is believed to be from foreign fishing vessels. The problem has been discussed in recent bilateral meetings with Japan and the Soviet Union on fisheries operations in the North Pacific Ocean and in the Bering Sea. It was agreed that contamination of the high seas is a growing and serious problem and that efforts would be made by the three nations to help reduce it.

COMMUNITY NUTRITION AGENCY OF HUDSON COUNTY

Mr. CASE. Mr. President, last year both the Congress and the President made clear their intent to reach every needy child under the national school lunch program.

An innovative demonstration program has been proposed for Hudson County, N.J., which currently provides only 8,500 school lunches daily, even though there are 92,517 public school