

PROPOSAL FOR HED MASTERS PROJECT
- AN ANALYSIS OF PESTICIDE INFORMATION SYSTEMS -

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The following is a proposal for my Masters project within the Health, Environment, and Development (HED) program. The goal is to complete the research I began with Dr. Alfred Spira in June, 2002 under his Fulbright IPER Scholarship, and to produce a written report from this research by May, 2003.¹

Purpose of the Project:

The links between pesticides and human health have become increasingly evident over the last few decades. Either through direct exposure or through their dispersal into air, water, soil, and food, agricultural chemicals have been identified as a probable cause in the development of reproductive problems, poisonings, developmental and nerve disorders, cancers, and several other human health challenges. For this reason, it is vital that all nations have a means of determining the amount and type of pesticide exposure to critical sectors of the population.

The purpose of this project is to examine the ways in which such information on pesticide exposures, use, food, air, and water residues is obtained, used by government agencies, and made available and useful to NGOs and the general public. Such data are currently more detailed and accessible in more industrialized nations, but are needed in less-developed nations that lack proper worker protection and stringent pesticide regulations. After examining how this information is collected and used in the U.S., which currently has one of the most extensive pesticide information tracking systems in the world, the goal will be to identify the strengths and weaknesses of the U.S. system in both protecting public health and in empowering organizations and community members to make informed decisions. Through this analysis of U.S. pesticide information availability, the ultimate goal will be the development of recommendations for pesticide surveillance systems in less-developed nations, based on what is found through this research.

¹ Dr. Alfred Spira, MD, PhD, is a professor of public health in Paris. Under a Fulbright International Program on Environment and Reproductive Health (IPER) scholarship, he was a visiting scholar at UC Berkeley's School of Public Health in Spring, 2002. During this time, I became involved in his research for the Fulbright Program. My portion of the research has focused on describing pesticide information systems in California, New York, Massachusetts, Oregon, the U.S. as a whole, and other select countries within the scope of his research (Japan, Korea, China, South Africa, the Ukraine, Israel and Palestine), where information is available. Included in this research is all data available on use, exposures, food, air and water residues for the attached list of potential endocrine-disrupting pesticides.

Description:

This research is being conducted in the form of: reviews of existing literature on the links between pesticides and human health effects and on pesticide reporting systems; through interviews with pesticide regulatory contacts and community organizations; and through searches on international government and non-governmental websites.

Initially, the research entails a detailed review and description of the pesticide reporting system in California. This includes an examination of all pesticide use, occupational exposure, exposure to the general public, and residue data that are available in the state, utilizing both government and nongovernmental pesticide data. California was chosen as a starting point because it has one of the most detailed systems for reporting pesticide use and exposure data in the world. This part of the analysis will include a look at how this data is generated, publicized, and assessed for quality control, and finally, how it is used by experts, decision makers, and the general public.

Research throughout the project will focus on the attached list of potential endocrine-disrupting pesticides. These pesticides were chosen in conjunction with Dr. Alfred Spira's research for his Fulbright project. In describing the various pesticide information systems, any data that may be attained from the systems for the listed pesticides, in terms of estimated use, exposures, food, air and water residues will be included throughout the project. Evaluation of these data will serve as an important indicator of how much information is indeed available to the general public through current information systems, and what types of analysis can be done with the available data.

Next, there will be a brief examination of pesticide reporting systems in a few other selected states in the U.S.: Massachusetts, Oregon, and New York. Points to be addressed will include whether and why there are similarities and differences among the different state systems, and whether other states followed California's model, or if they chose to set their systems up in a different way.

Stemming from this will be a look at the U.S. as a whole in terms of its pesticide reporting systems. Important differences between states and regions will be highlighted. Overarching questions will be visited here, including what sort of obstacles block public access to certain pesticide information. One such obstacle to be examined is the relationship between industry and the general population, and in particular, how industry often keeps pesticide information unavailable and/or inaccessible to the public at large. It will be asked why such obstacles exist and what can be done to address them.

The final part of this project will be the development of recommendations for future pesticide surveillance systems and methods in less-developed nations. The goal here is that important observations and lessons will come across throughout the research that will lead to useful recommendations for the development of new pesticide

information systems throughout the world. Clearly, there are important differences between the U.S. and most less-industrialized nations that will necessitate different approaches to information tracking systems. Such differences will need to be accounted for in these recommendations. Also to be included in this part of the project is selected pertinent findings from research on less-developed nations in terms of pesticide use, problems, and tracking systems. Nations to be included here, depending on information availability, may include China, Korea, South Africa, Israel, Palestine, and the Ukraine.

List of Potential Endocrine-Disrupting Pesticides for which Data will be Collected throughout the Project:

2, 4-D	Linuron
4-chloro-2-methylphenol	Malathion
Acetochlor	Maneb
Alachlor	Metam Natrium
Amitrole	Methylbromide
Atrazine	Methylparathion
Carbendazim	Parathion (-ethyl)
Diazinon	Prochloraz
Dicofol	Propanil
Dimethoate	Simazine
Diuron	Thiram
Endosulfan	Triadimefon
Endosulfan (alpha)	Vinclozolin
Endosulfan (beta)	Zineb
Iprodione	Ziram
Lindane	