

PESTICIDE POISONING: PAYMENT OF WOMEN IN DEVELOPING COUNTRIES

B. Eleanor Anstey

Les commentaires des femmes à l'atelier "Les pesticides et les femmes du Tiers-Monde", à la conférence de la fin de la Décennie pour les femmes, qui eut lieu à Nairobi, au Kenya, confirment le fait que beaucoup de femmes dans les pays en voie de développement utilisent des pesticides sans en connaître les dangers, sans moyens de protection – ou sans les ressources nécessaires pour se protéger de ces produits chimiques. L'analphabétisme, le manque de formation et d'équipement, le peu de contrôles législatifs, s'ajoutent à des pesticides toxiques inadéquatement marqués, mal emballés et irresponsablement promus. Il en résulte que près de 400,000 personnes sont empoisonnées par ces produits chaque année – la majorité vivante dans les pays en voie de développement. Pour protéger la santé, il faut que les femmes de ces pays reçoivent des renseignements pertinents et compréhensibles au sujet de l'emploi et de l'application des pesticides.

I had always thought it must be so. I knew that in order to use pesticides properly, warning information must be provided, and users must be able to read these labels, have access to water, fuel, and medical services. I also knew that nearly two-thirds of the world's 600 million working women are in rural areas of developing countries; that farming is the main source of employment for 80 percent of African women, 73 percent of Asian women and 40 percent of Latin American women; that educational opportunities are limited for them; and that there are water shortages in these countries. Given these realities, I believed that women in developing countries must be at risk if they apply pesticides in their fields. My deepest suspicions were confirmed when I conducted a workshop about pesticides and women in developing countries at the UN End of Decade for Women Conference in Nairobi, Kenya.

A Kenyan woman, in utter disbelief blurted out, "But no one ever told us that pesticides are harmful and should not be applied with bare hands. We knew

women were having terrible nosebleeds and difficulty breathing but we didn't know what caused it." A woman from Mombasa, near tears, said, "I have it stored in the same room in my house with the children. I didn't know pesticides might cause cancer."

A woman from Bhopal, India volunteered that the tragedy was not only that 2,500 were killed in an industrial disaster in December 1984 at a Union Carbide pesticide plant in Bhopal, but also that the sterility of males, the incidence of blindness among persons, birth defects of children and the respiratory problems resulting from the accident were the heritage of the survivors. A woman from Tanzania agreed with me that it was not uncommon to find pesticides in unmarked bottles in a grocery store alongside bottled condiments and other foods.

For some people the problems were so immediate that they wished to focus on practical aspects, while an Australian activist thought we should abandon the discussion about the practical and get on to the political ramifications. And so the discussion continued.

The heart of the workshop was concerned with the acute health effects of exposure to hazardous chemicals recognized as a serious concern only in the past one and one-half decades. Common pesticides have been found to cause long-term chronic effects such as sterility in males and birth defects in children;¹ organic phosphorus insecticides have the ability to destroy enzymes that target the nervous system of insects or warm-blooded animals.² Many widely used pesticides are highly toxic: as little as a teaspoonful may be enough to kill a 160-pound person.³

Since women in First and Third World countries often work directly and indirectly with pesticides, they would profit from knowledge of the environmental and physical effects of pesticides. In some regions, women apply the farm chemicals. Women are usually the persons to launder contaminated clothing. In food preparation, women deal with the dangers of pes-

ticide residue, contamination of ground water and chemical waste disposals. Women are usually the persons responsible for taking care of the children. Since children play in a variety of areas, mothers need to know about proper storage procedures and the dangers of allowing storage areas to remain unlocked. Women will likely be the persons who need to be able to recognize the symptoms of poisoning. Despite their extended contact with chemical pesticides, little evidence exists of educational attempts to apprise rural women of potential pesticide hazards, or of the importance of possessing such knowledge.

In developing countries illiteracy, lack of training and equipment, lack of effective legislative controls, and an especially susceptible population combine with the availability of highly toxic pesticides which are often badly labeled, poorly packaged and irresponsibly promoted. In addition, the uninformed belief that "more is better" may drive people to apply pesticides more often and in greater quantities than is desirable, either for maximum safety or for the best crop yields. From 1950 to 1983, pesticide production increased from 200,000 to 2.7 billion pounds.⁴ According to World Health Organization figures, the result of all these factors show nearly 400,000 people a year poisoned by pesticides, the bulk of them in developing countries.

Leptophos, a nerve-damaging pesticide that brings on paralysis in its victims, was never approved for sale in the United States.⁵ In Indonesia, according to an official of that country's Food and Agriculture Organization, leptophos was sold "alongside the potatoes and rice . . . people just collect it in sugar sacks, milk cartons, Coke Bottles . . ." "One Central American farm survey found levels of the pesticide, aldrin, on cabbage to be nearly 2,000 times the level allowed in food sold in the United States.⁷ The average content of the pesticide Dichloro-diphenyltrichlore-ethane (DDT) in the blood of people in Guatemala and Nicaragua is

over 30 times the United States average.⁸ Women in Guatemala have the highest level of DDT in breastmilk of any country in the world.⁹

Pesticide poisoning in the Third World occurs in a variety of ways. Farm workers mixing and applying these chemicals or entering fields after spraying are the group most at risk. Other people, working in formulation factories or for anti-malaria programs may also be exposed in the course of their work. Estimates state that around 40 percent of accidental poisonings are occupational. Other cases include children drinking pesticides by mistake, families using pesticide containers for storing food or water, and contamination of food during transport or storage. In all these cases, the common cause is the availability, often with very little effective restriction or control of very toxic pesticides in conditions where the necessary safety precautions are highly unrealistic.¹⁰

The leaders of many developing nations are themselves deeply enmeshed in the pesticide trade. "One of the reasons the less-developed countries' governments do nothing about the pesticide problem," says Hubbard of the World Health Organization, "is that the people who use pesticides, the people who import pesticides and the people who regulate pesticides are the same people. It's a tight little group in each developing country."

Despite attempts of industrialized countries to regulate hazardous substances and promote safe use of pesticides in agriculture, the fact remains that potentially hazardous substances continue to be used in developing countries. Pesticide usage has a tremendous impact on the lives of women around the world.

Health protection requires that a bare minimum of information should be given to women about pesticide usage and application. Women need to know how to read labels; they need to understand the directions about storage, laundering contaminated clothes, transportation of pesticides, and protective clothing to be worn. Furthermore, if label information is to be helpful, the directions must be relevant for the users.

The label offers pertinent information. Each company uses brand names to identify its products. The brand name shows plainly on the front panel of the label. Different types of insecticide formulation require different methods of handling.

The label tells the names and amounts of the active ingredients as well as the name and address of the company. If the product is highly toxic this section of the label will inform the user of the amount required to kill a person and likewise instruct the physician of the proper treatment for poisoning. While this information might be important for persons in industrialized countries, the information means little or nothing if a woman cannot read the label. Likewise giving instruction for the doctor presumes that one is readily available – contrary to the statistics, which show that in some developing countries there is one doctor for approximately every 14,900 persons. However, if the label were marked with some international symbol and women were instructed as to the meaning of it, their safety would not be jeopardized by their lack of literacy skills.

Women might not be able to read the instructions delineating how poison enters the body, but verbal instructions could easily inform them of the three ways pesticide poisoning enters the body: absorption through the skin, inhaling by breathing dust or spray, and ingestion by swallowing, eating, or smoking with hands that have handled pesticides. If instructions as simple as these had been given, the rural Kenyan women would not have been applying pesticides with their bare hands.

The label must also inform users of the symptoms and treatment of pesticide poisoning. The person affected may not recognize the danger signals of pesticide poisoning. Early symptoms to identify are dizziness, a staggering or wobbly walk, blurred vision, cramps, pin-point pupils and nervousness. More advanced cases of poisoning may also have symptoms of excessive sweating and watery eyes. Severe cases may involve nausea, vomiting, confusion, breathing difficulty and in some cases, convulsions. In poisoning cases involving liquid insecticides there is a great possibility of aspirating into the lungs the petroleum product in which the chemical is dissolved. Should aspiration occur, this condition presents a serious threat of chemical pneumonia and impaired breathing, requiring immediate emergency medical attention.

Immediate action must be taken. The material must be removed from contact with the mouth, skin or eyes. The skin and hair should be washed thoroughly

with soap and water and any contaminated clothing removed. If the eyes are exposed, they should be flushed with clear water for at least five minutes and not rubbed. The victim should be taken immediately to a hospital emergency room.

Two assumptions are made by the people who write these directives: availability of water and hospitals. When women walk five or six hours carrying eleven gallons of water, the chances are slight that they have extra water "to flush with clear water for at least five minutes." Also, few hospitals properly equipped to handle pesticide poisoning exist in rural areas – even if women were able to find transportation to the hospital.

Other unrealistic instructions for the use of water involve laundry. Washing insecticide-contaminated clothing requires special precautions. Textile researchers agree that clothing worn while applying pesticides should be washed after every wearing. Pesticide-soiled clothes are to be pre-rinsed by spraying or hosing them as they hang on a line outdoors; hot water (140°F) is recommended. Not only is water not plentiful in developing countries, but women also walk many miles daily to carry firewood. The likelihood of women using precious commodities of wood and water to follow these instructions is minimal.

Guidelines for pesticide storage state that the storage place should be fire-resistant, an exhaust fan should be used for ventilation, and a lock should be placed on the door. Many of the women simply keep the pesticides in their homes where the family members live. Keeping these highly toxic materials so close to living space increases the possibility of breathing the fumes, or of children actually swallowing the farm chemicals. Again given housing structures and available technology, the guidelines clearly are not relevant to persons living in a developing country.

Those who use pesticides are warned to transport the farm chemicals in the back of a truck to keep them from contact with groceries which might be inside the vehicle. Most women in rural areas have no cars; in some parts of Southeast Asia and Africa the labels were removed from the pesticide containers, and women and children were carrying the chemicals in their hands. The inherent dangers to the persons are evident.



Illustration by Julie Paulsen

Finally, chemical containers should be disposed of properly. Recommended procedures for proper disposal are: 1) drain and repeat rinsing and draining three times, 2) crush containers immediately and take to the landfill or bury eighteen inches deep in an isolated area away from a water supply, and 3) never re-use containers.¹¹ When I juxtapose the reality of women's lives in developing countries with these instructions, I find that the directives are ill-fated to living conditions there.

Does this mean that pesticides should never be used in developing countries? That question requires another set of considerations. What I do emphasize is that *if* and *where* women are applying pesticides, they should be given protective information which they can understand. In addition, women need the water, fuel and medical services required by the directions.

¹¹Jay Feldman, "The Pesticide Debate," *ruralamerica* (March 1980), p.5.

¹²Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin Company, 1962), p.29.

¹³Donald P. Morgan, M.D., *Recognition and Management of Pesticide Poisonings* (Washington, D.C.: United States Government Printing Office, #055-004-0013-7).

¹⁴*Pesticide Safety: Myths and Facts* (Washington, D.C.: National Coalition Against Misuse of Pesticides, 1984). Pamphlet.

¹⁵David Weir and Mark Shapiro, *Circle of Poison* (San Francisco: Institute for Food and Development Policy, 1981), p.23.

¹⁶David Weir, et al., "The Boomerang Crime," *Mother Jones*, Vol.4, No.9 (November 1979), p.43.

¹⁷*Ibid.*

¹⁸Ruth Norris, ed., *Pills, Pesticides and Profits* (Croton-on-Hudson, NY: North River Press, 1982), p.17.

"Basta Ya," slide/tape on women of Central America.

¹⁹David Bull, *A Growing Problem: Pesticides and the Third World Poor* (Oxford: Oxfam Printing Room, 1982), p.38.

²⁰"Think Before You Throw . . . Dispose of Chemical Containers Safely," (Des Moines: Iowa Department of Environmental Quality, 1980).

B. Eleanor Anstey is an Assistant Professor at The University of Iowa, School of Social Work and serves as chair for Women in Development at The University of Iowa. She conducted a workshop on "Pesticides and Third World Women" at the UN End of Decade for Women Conference in Nairobi in July 1985.

ORDAINED

You carry an empty can of
confidence
While I thirst for forty years.
You see the future through
a microscope
While I seek a highway in
the desert.
You lie in the soft green shade
of smugness
While I am scorched by the
pitiless sun.
You hold the oars of love
While I, like the fingers of
a drowning man,
Grab at the twilight of life.
Glow worms sparkle in your fist
While sadness, fast in my grip,
Tries to penetrate the lines on
my palm.
Spring at your lips calls
At the locked door of my heart
Which did not submit to
the hurricane;
Would not succumb to the flood;
Could not be moved by
the earthquake.
Carying the empty can
of confidence,
How long will you stand at
this door?

Kishwar Naheed
Lahore, Pakistan