



HENRIK DRESCHER

# THE SPRAYS OF SPRING

BY MICHAEL McCUSKER

*The chemical war is never won, and all life is caught in its crossfire.*

~RACHEL CARSON

Sweet Spring. Buds, blooms and blossoms, sounds of birds and cropdusters, skies shot with billowy clouds and mists of pesticides.

The eternal war against insects and weeds is renewed. We are dusted, misted, sprayed, hosed and powdered with some of the deadliest chemicals ever conceived. To kill pickle-worms, aphids, leaf-hoppers, spider-mites, cabbage-worms, spittlebugs, potato beetles, carpenter ants, Japanese beetles, corn-earworms, grasshoppers, codling moths, blister beetles — as well as unwanted plants and weeds — we are exposed to insecticides, miticides, acaricides, nematocides, fungicides, bactericides, avicides, herbicides, rodenticides, piscicides, molluscicides and predecides, plus dessiccants and defoliants.

These pesticides kill by simply touching insects; they kill when swallowed or by being taken into the blood of animals or the sap of plants; they kill through inhalation or by being otherwise absorbed. Selective pesticides are designed to kill only certain kinds of plants, insects or animals. Nonselective pesticides kill most plants, insects and animals.

These chemicals are sprayed by aircraft, from tanks on trucks, from knapsack containers, hoses and handheld sprayers. They are dusted, misted or sprayed over farms, forests and gardens and are also used on school playgrounds, golf courses, the lawns of public buildings and along roadsides. They drift in forms of dust and mist, or move with soil particles by erosion, they leach through the soil into lakes, rivers and streams and are carried as residues on crops and livestock or evaporate and move with air currents.

Of course we are not only assaulted by pesticides from air, land and water through inhalation or permeation. We eat and drink them also; in fruits, vegetables, meats and milk.

A billion pounds of these poisons are applied annually within the United States and it is virtually impossible to live anywhere in the country without being exposed — in many areas saturated. Wildlife is contaminated. Food chains are affected. Habitat is destroyed and human life is endangered.

Pesticides are linked to cancer, nervous system damage, degenerative changes in liver and kidneys, fetal injury, miscarriages, birth defects, genetic mutations and other serious diseases. Pesticides occur in mother's milk and in the tissues of unborn children.

Exposure to these chemicals causes irreversible changes that alter genetic materials in cells permanently. Pesticide residues and their breakdown products are routinely found in blood and urine samples from both urban and rural residents nationwide. Pesticide residues capable of causing cancer and mutations show up in human sperm samples.

A study by the National Academy of Sciences concluded that 28 pesticides known to cause cancer and found in foods might cause more than 1,000,000 cancers over the next 70 years, and the Natural Resources Defense Council, a private environmental group, reports that children's exposure to pesticides and potential harm from these chemicals in food is 6 to 12 times greater than that of adults.

Rachel Carson, who sounded the alarm about the dangers of pesticides in her 1961 book *Silent Spring*, called these poisons 'Biocides'.

There are two kinds of biocides. Botanical or organic, and synthetic or manmade. Though the first are dangerous enough — powdered arsenic has been used for centuries and has a significant death toll — the synthetic chemicals are unsurpassed in their toxicity. Initial development of these chemicals was during World War 2 following the discovery of DDT. Ironically, the growth of the synthetic pesticide industry started in the war years by testing these chemicals on insects as possible agents to kill human enemies.

The government regulatory process is a failure as much in pesticide abuse as Pentagon contracts. The political and commercial copulative relationship between agencies and industry rules out any effectively honest regulation of pesticide use and abuse. In fact, government agencies rely on manufacturers' data about pesticide safety with the ingenious claim the process saves taxpayers' money. Other information about toxicity levels or research is either suppressed or often falsified.

The standard used by both government and industry is a so-called "safe level" of toxicity — though it has been determined there is no safe level of exposure to anything that causes cancer or mutations — which is used short of outright banning of a substance and is generally assumed to not cause immediate harm. As these chemicals are new when first labeled there is no other method of determining long-range or cumulative effects than "wait and see". Even when a chemical is harmful to test animals, industry and government officials say they cannot be sure they are harmful to humans. Labeling information is itself suspect, particularly claims that a pesticide is safe or that its ingredients are nonpoisonous.

Whenever a substance is banned or restricted, which is seldom, unrestricted use of stocks on hand are usually allowed to be sold and used while a number of equally toxic chemicals that are in the "wait and see" stage are put into use as replacements. Chemicals that are singled out as a result of harmful effects are rarely equated with the multiple effects of cumulative exposure to dozens of pesticides, often simultaneously.

Not only has the ingenious development of synthetic pesticides outrun the knowledge of their disastrous effects on living organisms but residues from their manufacture accumulate in largely unregulated dumps where some break down into even deadlier compounds that seep into land, water and air.

Carol Van Strum of Five Forks, Oregon, in her 1983 book, *A Bitter Fog: Herbicides & Human Rights*, echoed a call by Rachel Carson for a constitutional amendment to protect citizens from environmental poisoning. "To those who bear the risk," she wrote, "exposure to poisons is a matter of life and death. Decisions about poisons which disrupt the basic mechanisms of life and the biological integrity of future generations raise profound moral questions. Society cannot afford to entrust such decisions to corporate or political entities that exempt themselves from the restraints of morality and ethics."

Current law requires a person threatened with exposure to a toxic chemical to prove that irreparable harm will result while the information for such proof is kept secret or not available because adequate research has not been done — not to

mention revisions of studies that are watered down to support the toxic chemical industry. Van Strum believes "that a society insisting on its right of informed consent would quickly redirect pest control...toward nonpoisonous methods of integrated pest management." Pest control, she writes, "would adopt nature's system of checks and balances essential to a true democracy."

Rachel Carson said that the only reason "the Bill of Rights contains no guarantees that a citizen shall be secure against lethal poisons distributed whether by private individuals or government officials" is because our forefathers, "despite their considerable wisdom and foresight, could conceive of no such problem."

An informed consent amendment is already provided a constitutional basis by the 9th Amendment which states that in addition to the specific rights enumerated in the Constitution, there are "others retained by the people." History, however, has shown that specific rights must necessarily be specified if they are to be upheld. Nothing could be more specific than two questions posed by Van Strum:

~Do I or do I not have the right to know the effects of the stuff you intend to expose me to?

~Do you or do you not have to get my permission before exposing me to it?

A Constitutional amendment would not be an instant or complete solution to the problems of pesticides and government and industry will spend millions of dollars fighting it. But as Van Strum says, "In opposing informed consent government and industry would have to admit that toxic exposure does occur and that people have no right either to know about it or stop it. They would have to convince the public that ignorance and helplessness are preferable to knowledge and control."

In the meantime the insects we attempt to eradicate continue to build resistance to pesticides which provokes development of ever more toxic chemicals. For humans to build resistance will take hundreds of generations at roughly three generations a century — new insect generations occur in a matter of days or weeks. The chemical control of plants and insects turns out to be a greater menace to ourselves than to its targets.

"Future historians may well be amazed by our own distorted sense of proportion," Rachel Carson wrote in *Silent Spring*. "How could intelligent beings seek to control an unwanted species by a method that contaminated the entire environment and brought the threat of disease and death even to their own kind?"

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