● BASIC INFORMATION ABOUT PESTICIDES ●

ARE PESTICIDES HAZARDOUS TO OUR HEALTH?

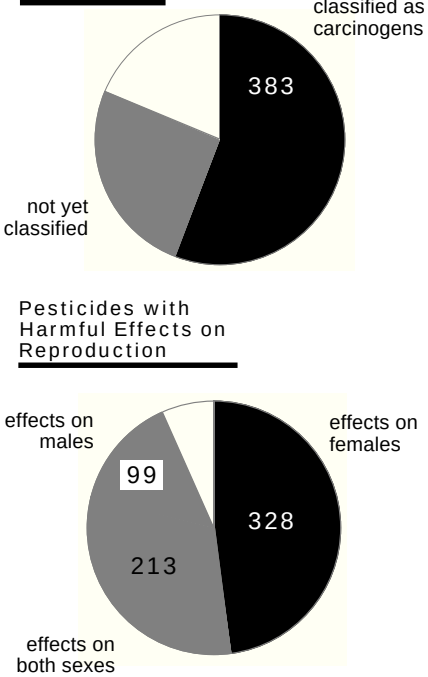
Pesticides with significant health hazards are applied in startling quantities. For example, just looking at the 26 most widely used pesticides, Americans annually apply about 380 million pounds of pesticides classified by the U.S. Environmental Protection Agency (EPA) as carcinogens. About 650 million pounds of pesticides that cause reproductive problems are used annually, with hundreds of millions of applications in our homes, on our lawns, and in our gardens.

As chemicals that are biologically active by design, it may not be surprising that pesticides can damage human health. Small amounts of some pesticides cause death;[1] others burn or irritate eyes and skin,[1] damage the nervous system,[2] disrupt our hormone[3] and immune systems,[4] reduce our ability to successfully reproduce,[3] and cause cancer.[5] What is surprising, however, are the enormous quantities of these hazardous chemicals that are used in the U.S. every year.

Pesticides and Cancer

As an example of the use of pesticides which damage our health, consider pesticides that are carcinogenic (cancer-causing). EPA is in the process of classifying pesticides based on whether or not they cause cancer in studies of laboratory animals, and so far has evaluated about 250 pesticides.[5] NCAP looked at the 26 pesticides that are most widely used in the U.S.[6,7] (This includes all pesticides with an annual use of at least six million pounds.[6]) Of these pesticides, 12 are classified as carcinogens by EPA,[5,8] with an annual use that totals 380 million pounds.[6] In other words, our dependence on chemical pest control results in 380 million pounds of carcinogenic pesticides being purposefully applied to the environment every year.

Another way of evaluating pesticides for their ability to cause cancer is to study the incidence of the disease in humans who have been exposed to particular pesticides. Such studies are called epidemiological studies. Although these studies are less common than laboratory studies, they have demonstrated associations between increased exposure to four frequently used pesticides and an increased risk of cancer.[9-18] Together, almost 190 million pounds of these four pesticides are used annually,[6] including 120 million household applications every year.[19]



Sources: References # 5-7, 18-49.

Pesticides and Our Ability to Reproduce

Pesticides have a variety of effects on reproduction. In exposed people, some pesticides cause birth defects, some cause miscarriages, some cause babies to be small, and others decrease fertility.[20-23] Reproductive effects can occur in males, females, or both. As with cancer, perhaps the most striking statistics are the sheer volume of pesticides used every year that have harmful effects on reproduction.

Looking again at the 26 most commonly used pesticides, 9 have harmful effects on male reproduction (causing sperm abnormalities, reducing sperm production, disrupting male hormones, and damaging male reproductive organs, mostly in laboratory tests).[24-33] Use of these pesticides totals over 300 million pounds per year,[6] including about 360 million household applications.[19]

Most (17) of the 26 commonly-used pesticides have caused decreased pregnancy success in laboratory tests. Miscarriages, a reduction in the number of living offspring, and reduced birth weights are common problems.[34-54] Total use of these pesticides is about 600 million pounds per year,[6] including about 330 million household applications.[17]

These examples lead to two straightforward conclusions: many pesticides pose significant hazards; and millions of pounds of these pesticides are used annually.

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8. Based on reference #5, the 12 carcinogenic pesticides (with their EPA cancer classification) are atrazine (C=possible), metolachlor (C), metam sodium (B2=probable), dichloropropene (B2), cyanazine (C), pendimethalin (C), trifluralin (C), acetochlor (B2), chlorothalonil (likely), mancozeb (B2), fluometuron (C), and parathion (C).
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