

Pesticide Backgrounder

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Who is calling for increased protections from harmful pesticide use?

The Center for Biological Diversity and Pesticide Action Network North America filed suit against the Environmental Protection Agency in January 2011 for its failure to adequately evaluate and regulate pesticides in accordance with the Endangered Species Act. Under this statute, the agency is required to conduct formal consultations with wildlife regulatory agencies about the impacts of pesticides on hundreds of protected species.

In support of this suit, more than 130 other groups in 35 states, representing public-health, food-security, sustainable-farming, farmworker and conservation interests, have submitted a letter to the EPA calling for more protections from pesticide impacts under the strong legal protections of the Endangered Species Act.

What do consultations under the Endangered Species Act accomplish?

The EPA is required by the Act to consult with expert wildlife agencies (the Fish and Wildlife Service and National Marine Fisheries Service) regarding pesticides that may jeopardize protected species. Formal consultations are intended to ensure that the EPA avoids pesticide uses that harm endangered species. At the completion of consultation, the federal wildlife agency issues a biological opinion that determines if the agency action is likely to jeopardize listed species. The opinion may specify reasonable and prudent alternatives that will avoid harm to species and may also suggest modifications to avoid adverse effects.

The consultation process is a necessary and workable tool for getting good science on pesticide safety, and for implementing common-sense restrictions in environmentally sensitive areas. For the most dangerous pesticides, the EPA or registrant may choose to remove the product from market. More likely, however, is a flexible agency-to-agency process that will restrict the most harmful uses while identifying viable alternatives.

Aren't there other federal laws that regulate dangerous pesticides?

Yes. The Federal Insecticide Fungicide Rodenticide Act (FIFRA) regulates registration, sale and use of pesticides. FIFRA is fundamentally a licensing law with consumer-protection origins administered by the EPA. The ability to regulate pesticide use under FIFRA is very limited. Unlike other environmental statutes, FIFRA does not establish a permitting system for pesticide use. No approval is required prior to using a pesticide, and the law affords no localized decision-making mechanisms. FIFRA's regulation of pesticide "use" is achieved instead through labeling restrictions. FIFRA was last significantly updated 40 years ago and has been subject to major pesticide industry and farm-lobby influence.

What is wrong with FIFRA?

The pesticide industry has subverted the intended protections of FIFRA, and the statute remains subject to intensive lobbying by pesticide interests. Chemical corporations conduct the science, which often escapes peer review and public scrutiny under the veil of "confidential business information." FIFRA has multiple mechanisms for allowing pesticide manufacturers to delay any

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actions that would remove their products from the market. The EPA cannot act quickly and independently to pull known hazardous products from the market. FIFRA delegates enforcement to the states, which are poorly funded to do enforcement. Enforcement of mitigation measures that are on pesticide labels rarely occurs, even for the most toxic pesticides.

The risk assessments for pesticides conducted under FIFRA are flawed. Pesticides are evaluated in isolation rather than in pesticide mixtures, so synergistic and additive effects of mixtures and multiple pesticides applied to crops are not considered. Synergism, or the “chemical cocktail effect,” happens when the effect of multiple chemicals is more than their additive effects. Only active ingredients are assessed, not inert ingredients. “Inerts” comprise the bulk of pesticide product formulations and are associated with a host of health risks — particularly in combination.

What are the human health risks from pesticides?

Many of the pesticides of concern for harmful effects on endangered wildlife are also linked to serious health effects in humans, such as cancer, neurodevelopmental toxicity, reproductive harm, birth defects and a host of other, irreversible endocrine-system harms. Farm work remains one of the most dangerous jobs in the country because of pesticide exposure, and rural communities still face higher rates of pesticide-related diseases such as Parkinson’s, autoimmune disease and certain cancers. Women of reproductive age, the elderly and children all likewise face unacceptable levels of exposure to a mix of potent chemicals that are known to harm human health, including pesticides. Certain childhood cancers, birth defects, neurodevelopmental disorders and a host of other human health harms linked to environmental chemical exposures are all on the rise. A recent report from the president’s Cancer Panel acknowledges that experts have for decades “grossly underestimated” the contributions of environmental contaminants to disease.

What are endocrine disruptors?

Numerous pesticides act as endocrine disruptors — chemicals that alter the structure or function of the body’s endocrine system, which uses hormones to regulate growth, metabolism and tissue function. Endocrine disruptors interfere with natural hormone functions, damaging reproductive function and offspring, and cause developmental, neurological and immune problems in wildlife and humans. Pesticides have caused sexual deformities such as intersex fish (with male and female reproductive parts), which cannot reproduce, and chemical castration of male frogs even at extremely low concentrations.

What are the risks to wildlife from pesticides?

Some contaminated waterways are regularly subjected to toxic pulses of combinations of pesticides deadly to fish. Pesticides have played a major role in the collapse of many native fish populations and are a leading cause of the loss of native amphibians. The Fish and Wildlife Service estimates that 72 million birds are killed by pesticides in the United States each year. Application of pesticides such as carbofuran to crops can result in as many as 17 bird kills for every five acres treated. Thousands of nontarget animals such as mountain lions, bobcats, hawks and owls are killed or harmed each year by poisoned baits approved by the EPA.

Pesticides are a significant threat to endangered species, biological diversity and pollinating insects and bats. Neonicotinoid insecticides, which are relatively new blockbuster products used on hundreds of crops, were rushed to market without adequate testing under conditional registrations, and are suspected of contributing to the recent, rapid decline of honeybee populations known as

Colony Collapse Disorder. In Europe, governments pulled, restricted or refused to register these chemicals because of concerns over bee health.

How many endangered species are at risk?

The EPA and Fish and Wildlife Service have identified more than 800 endangered and threatened species that may be harmed by pesticides. Some examples include the Florida panther, coho salmon, California condor, Everglade snail kite, northern aplomado falcon, mountain yellow-legged frog, California tiger salamander, arroyo toad, Indiana bat and green sturgeon. The lawsuit against the EPA covers more than 200 endangered and threatened species jeopardized by inappropriate pesticide use.

Will stronger pesticide regulations hurt farmers and U.S. agriculture?

Consultations under the Endangered Species Act will not result in banning hundreds of pesticides overnight. The consultation process is a flexible agency-to-agency process that will likely restrict the most harmful pesticide uses while identifying viable alternatives. For the most dangerous pesticides, the EPA or registrant may choose to remove the product from market.

The hoped-for outcome is independent science on pesticide impacts on a reasonable timeline, resulting in common-sense use restrictions in environmentally sensitive areas.

Farmers, farmworkers and their families, and rural communities currently bear the brunt of pesticide health impacts, facing higher rates of Parkinson's disease, many cancers, autoimmune disorders, neurodevelopmental problems and a host of other pesticide-linked diseases. Stronger pesticide regulations will have immediate health-protective impacts in the lives of farmers, their families and their neighbors.

Many farmers are already transitioning off pesticides to more sustainable practices, and they deserve our support as they do so. Public support for transitioning already exists. Under the Farm Bill's Conservation title, green payments for farmers who steward the land are available, and well utilized. These "green payments" should be protected from budget cuts and linked to regulatory decisions that restrict the use of pesticides. Many of the groups on the letter actively advocate for the continued funding of these supports.

Are there viable alternatives to pesticides available?

There are numerous effective organic pesticides such as botanicals, microbials, synthetics and minerals. Bio-intensive Integrated Pest Management (IPM) relies upon information on the life cycles of pests and their interaction with the environment to manage pest damage by the most economical means, and with the least possible hazard to people, property and the environment. IPM relies primarily on nonchemical means — such as controlling climate, food sources and building entry points — to prevent and manage pest infestation. Also available is use of beneficial insects including predators and parasitoids such as lady beetles and various wasps, as well as certain nematodes that are used for insect control. Organic agriculture and less-harmful alternatives to chemical pesticides such as organic pesticides and bio-intensive IPM are better in the long term for the health of farmers, farmworkers, America's communities, wildlife and the sustainability of U.S. agriculture.