

EPA Won't Restrict Toxic Herbicide Atrazine, Despite Health Threat

White House documents obtained by NRDC reveal that industry influenced the decision.

The EPA has decided not to limit one of the nation's most widely used weed-killers, a chemical that, according to several recent studies, threatens human health and the environment. The October 2003 decision -- which the EPA was required to make under a court-approved consent decree reached with NRDC in 2001 -- will allow Syngenta, the main manufacturer of atrazine, and other companies to continue to sell the chemical in the United States with no significant restrictions.

To determine whether industry played a role in shaping the EPA's decision, NRDC filed a series of Freedom of Information Act requests with the White House and the EPA, which failed to produce relevant documents. In November 2003, NRDC filed a lawsuit charging that the White House and the agency were violating the freedom of information law by withholding documentary evidence. The following month, the White House released 22 documents, with most of their contents blacked out, including a memo from former senator Bob Dole to a high-level White House official urging the EPA not to restrict the hazardous weed-killer despite the environmental risks. The White House continues to withhold more than 80 other relevant documents.

In a lawsuit filed in August 2003, NRDC charged the EPA with failing to protect endangered species from atrazine, despite having acknowledged that the weed-killer might cause widespread harm to endangered species. NRDC is calling on the EPA to fulfill its obligations under the Endangered Species Act and ban atrazine from the market. NRDC has also asked Syngenta to hand over to the EPA, and to make readily available to the public, any other data it may have on atrazine's health effects.

In announcing its October 2003 decision not to restrict atrazine use, the EPA said it found that atrazine is not likely to cause cancer in humans. However, an August 2003 report from the EPA's independent scientific advisory panel noted that atrazine exposure could not be ruled out as the cause of cancers observed in studies of the chemical.

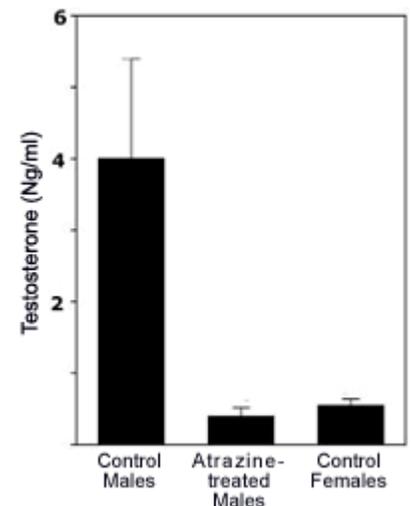
Several recent studies show that atrazine causes sexual abnormalities in frogs, and another revealed elevated levels of prostate cancer in workers at an atrazine manufacturing plant. Some of the findings resulted from research funded by the manufacturer itself. In at least one case, when the data's damning implications became clear, the company repeatedly insisted on new tests. Indeed, the frog data only became public after the scientist conducting the research ended his contract with the manufacturer -- a company formed by the merger of Novartis and Zeneca and now called Syngenta -- and re-ran his experiment independently.

Because of atrazine's risks, several European countries have already banned the chemical, and the European Union has announced it will ban it entirely by early 2005. In America, though, farmers continue to spray the weed-killer heavily on corn, sugarcane and other crops throughout the country. As a result, some portion of the more than 60 million pounds of atrazine applied annually makes its way into streams, rivers, lakes and drinking water supplies. The problem is at its worst in the spring, when atrazine is applied most heavily, then washed by rain into waterways.

EPA Cut Private Deal with Manufacturers

Under the deal, the EPA will adopt no regulatory restrictions on atrazine use, and more than 96 percent of the streams that the EPA has identified as being at highest risk from atrazine contamination will remain untested by Syngenta. Nor will the EPA take any steps to protect those streams.

The EPA has found that atrazine is toxic to some species in water at levels as low as 2.16 parts per billion (ppb). Under the new agreement, however, Syngenta will only be required to take additional steps, such as increased monitoring, when a stream exceeds a "level of concern" -- apparently a range from 10 to 20 ppb -- over a vaguely defined "prolonged period," and only then for the most contaminated of the 40 monitored streams.



A 2002 study by Dr. Tyrone Hayes of atrazine's effects on frogs found that sexually mature males suffered a 10-fold decrease in plasma testosterone. (See the study on the website of the [Proceedings of the National Academy of Sciences](#).)

In 2003, Dr. Hayes found that atrazine induced hermaphroditism at 0.1 ppb in American leopard frogs. (An abstract appears online in [Environmental Health Perspectives](#), April 2003.)

Sexual Deformities in Frogs

One of the first of several studies to turn up evidence of sexual deformities in frogs exposed to atrazine was conducted by Dr. Tyrone Hayes, and published -- after much delay -- in April 2002. Dr. Hayes conducted initial research with funding from Syngenta, and the deformities he found in the frogs included hermaphroditism.

Syngenta responded by repeatedly sending him back to re-run his research, and apparently did not submit the findings about hermaphroditism to the EPA. Frustrated by the delays, Dr. Hayes eventually gave up his Syngenta funding, ran the experiments again independently, and found the same results. Since then, Syngenta-funded researcher Tim Gross has reported similarly damaging effects to a different species of frogs exposed to atrazine, including males with abnormal female skin coloration.

Atrazine May Contribute to Human Cancers

Separately, data gathered by Syngenta also shows a potential link to prostate cancer in humans. But, as with the frog research, the company's data was suspiciously slow in reaching the public and the EPA. In the summer of 2001, NRDC learned that Syngenta had been tracking prostate cancer in the employees of its St. Gabriel, Louisiana atrazine plant. Only after NRDC alerted the EPA did Syngenta submit reports of numerous recent cancer cases to the agency. The study has since been published in the *Journal of Occupational and Environmental Medicine*. Its most significant finding is that Syngenta employees have elevated rates of prostate cancer -- a rate more than three-and-a-half times higher than the Louisiana statewide average. One worker employed by the St. Gabriel facility in the mid-1970s said that he "worked 'eyeball' deep in the powder [atrazine]" and recalls instances of employees "eating meals . . . in areas covered with atrazine dust." Another worker recalls his supervisors telling him that "atrazine could be eaten without any adverse health effects."

The Syngenta study might even understate the problem, because the company has not updated the numbers to include new cancer cases since 1999. While the company proposes that the increased detection of cancers is due to a company prostate screening program, it provides no data to support this view.

Atrazine Application on Corn Crops by State, 2001	
State	Pounds of Atrazine
CO, GA, KY, NC, ND, NY, PA, SD, TX, WI	Between 166,000 and 1,915,000
MI, MO, MN	Between 1,915,000 and 3,664,000
KS, OH	Between 3,664,000 and 5,413,000
NE	Between 5,413,000 and 7,162,000
IA, IN	Between 7,162,000 and 8,911,000
IL	Between 12,409,000 and 14,158,000
No data or very little data: AL, AR, AZ, CA, CT, DC, DE, FL, ID, LA, MA, MD, ME, MS, MT, NH, NJ, NM, NV, OK, OR, RI, SC, TN, VA, VT, WA, WV, WY	
Data: National Agriculture Statistics Service, Agricultural Chemical Use Database	

Protecting Your Family from Atrazine

Some large water systems test for atrazine in their water supplies and filter it from drinking water if necessary, but smaller systems often do not. The good news is that a simple activated carbon-based water filter -- like the ones commonly available in grocery stores and elsewhere in pitcher and faucet-mount varieties -- can filter atrazine from drinking water.

Related Websites:

[National Agriculture Statistics Service](#)

(pesticide application rates by state for many crops)

[EPA Documents and Public Comments on Atrazine](#)

(Docket # OPP-2003-0072)