

# Ten Years Later, Myth of 'Alar Scare' Persists

## How Chemical Industry Rewrote History of Banned Pesticide

### Environmental Working Group

On Aug. 18, 1998, *The New York Times'* Personal Health columnist, Jane E. Brody, wrote about an "updated and expanded" edition of "Facts vs. Fears," a report by the American Council on Science and Health reviewing "the greatest unfounded health scares of the last five decades." Brody led with the case any regular reader of the nation's paper of record would recognize as the most notorious example of environmental fear-mongering meeting media hype and producing consumer panic: Alar.

As Brody reminded her readers, Alar - Uniroyal Chemical Co.'s trade name for the compound daminozide - was sprayed on apples so that entire crops would ripen at the same time. In 1989, after 40 million Americans saw a *60 Minutes* story about a Natural Resources Defense Council (NRDC) report on Alar as a human carcinogen - one that posed particular risks for children - public outcry forced apple growers to stop using it and Uniroyal to pull it off the market.

According to Brody's column (reprinted in dozens of U.S. newspapers), although "subsequent tests by the National Cancer Institute and the Environmental Protection Agency failed to show that Alar caused cancer," in the wake of the broadcast "millions of alarmed parents panicked and dumped untold gallons of apple juice and bushels of apples [and] the apple industry lost about \$375 million." An accompanying photo caption said "the contention" that Alar causes cancer "was based on a 1973 study, but further tests failed to back it up." Brody called the Alar saga "a cautionary tale that should help you realize why it is unwise to leap before you look more closely at what any new study actually means."

That's sound advice. But there was a great deal that the *Times* didn't tell its readers that might have helped them look more closely at the real story of the so-called Alar scare - and the organization that has worked diligently to keep it alive, the American Council on Science and Health (ACSH). Approaching the tenth anniversary of the "*60 Minutes*" broadcast on Feb. 25, 1989, a review of the record shows:

- Prior to 1989, five separate, peer-reviewed studies of Alar and its chemical breakdown product, UDMH, had found a correlation between exposure to the chemicals and cancerous tumors in lab animals. In 1984 and again in 1987, the EPA classified Alar as a probable human carcinogen. In 1986, the American Academy of Pediatrics urged the EPA to ban it. Well before

the *60 Minutes* broadcast, public concern had already led six national grocery chains and nine major food processors to stop accepting apples treated with Alar. Washington State growers had pledged to voluntarily stop using it (although tests later revealed that many did not). Maine and Massachusetts had banned it outright.

- On Feb. 1, 1989, acting EPA Administrator John A. Moore, commenting on the preliminary results of Uniroyal's own study of Alar, stated: "There is an inescapable and direct correlation between exposure to UDMH and the development of life-threatening tumors in mice." EPA calculated the lifetime risk of cancer from Alar consumption at 45 in 1 million - 45 times the agency's "negligible" risk level. EPA announced the beginning of a process that would eventually result in a ban on Alar, but before it could take effect, Uniroyal pulled it from the market and its registration, or license for use, soon expired. In 1991 and again in 1992, the EPA reconfirmed its decision that Alar poses an unacceptable risk as a probable human carcinogen, although its new estimate of the cancer risk was about 23 in 1 million - still more than 20 times the acceptable risk level.
- The National Cancer Institute never issued a report clearing Alar as a carcinogen, notwithstanding the ACSH claim to the contrary. In fact, in 1992, an internal ACSH memo lamented, "So many professional organizations, including the National Cancer Institute and American Cancer Society flatly refused to say that the food supply was safe, that pesticide residues in food were not a cause of cancer, that Alar did not pose a risk . . ."1
- In 1993, a report by the National Academy of Sciences (NAS) validated a central premise of the NRDC report: that infants and young children, who consume a lot of apples and apple products, are particularly susceptible to carcinogens in food. The chair of the NAS study, Dr. Philip Landrigan, said: "NRDC was absolutely on the right track when they excoriated the regulatory agencies for having allowed a toxic material to stay on the market for 25 years." Subsequent reports by the World Health Organization's International Agency for Research on Cancer and the National Toxicology Program of the U.S. Public Health Service confirmed that Alar is carcinogenic.
- Apple growers never claimed losses of \$375 million. The amount specified in a 1990 lawsuit against *60 Minutes* and NRDC by Washington State growers was \$100 million. But a U.S. Department of Agriculture official

later said that the apple market only "stumble[d] momentarily" after the broadcast, and resumed its normal level within four months.<sup>2</sup> Within two years of the Alar controversy, apple prices were at an all-time high. In any event, federal courts at the district and appellate levels dismissed the lawsuit as having no basis in fact, a ruling upheld by the U.S. Supreme Court in 1996.

- Most egregiously excluded from Brody's column was the fact that her sole source, the American Council on Science and Health, is a front group for the food and chemical industries. According to the Columbia Journalism Review, in 1990 ACSH received more than half of its \$1.1 million in funding from food processors and chemical companies such as General Mills, Coca-Cola, Procter & Gamble, Dow Chemical, Union Carbide - and Uniroyal, the manufacturer of Alar.

To its credit, the Times ran a correction, acknowledging that Brody's column had "referred incompletely" to the government's findings and regulatory actions against Alar and "omitted a description of the finances of the American Council on Science and Health." But Brody is hardly alone. In the 10 years since the Alar story broke, so many reporters have swallowed the revisionist history of the case that "Alar" has become near-universal journalistic shorthand for an irrational health scare stemming from so-called junk science.

- On Jan. 6, 1998, a Washington Post editorial on the hamburger-disparagement lawsuit by Texas cattlemen against Oprah Winfrey referred to "the Alar scare" which was "later determined to be unfounded."
- On Feb. 23, 1996, the Los Angeles Times cited actress Meryl Streep's role in sounding the alarm on Alar an "embarrassment" because her assertions "turned out to be false."
- On May 7, 1995, The Wall Street Journal referred to the "Alar-on-apples uproar which practically destroyed the reputation of apples . . . using questionable scientific evidence."

Numerous other examples can be found, and not only in the elite national media. A search of newspaper databases by the Columbia Journalism Review turned up more than 160 Alar references in the first half of 1995. "All but a handful," wrote CJR contributor Elliott Negin, "present the Alar affair as much ado about nothing."

The Arizona Republic called Alar "a false alarm"; the Richmond Times-Dispatch referred to "the bogus Alar scare"; and the Providence Journal-Bulletin said "there was no

scientific evidence of harm." CJR also found that more than a dozen prominent news organizations, including the Washington Post, Los Angeles Times, USA Today and the Associated Press, covered the American Council on Science and Health's position on Alar or other chemicals in food "without mentioning its industry funding."

What's going on? With an abundance of evidence documenting that the Alar case was not an unfounded scare but a legitimate consumer uprising that pressured government and industry to do the right thing to protect public health, why does the news media continue to repeat the myths and misconceptions of Alar?

The answer is spin - a well-financed campaign, continuing to this day, by the food and chemical industries to discredit the Alar story and rewrite history. The key player in the campaign is the American Council on Science and Health and its president, Elizabeth Whelan.

Soon after the Alar story broke on *60 Minutes*, the apple industry began a campaign to discredit it, paying the public relations giant Hill & Knowlton more than \$1 million for ads claiming children would have to eat "a boxcar load" of apples a day to be at risk.

"The controversy scared the hell out of the agribusiness and food industries," says John Stauber, editor of PR Watch, a newsletter covering the public relations industry. "The food industry said, 'Never again,' [and] set out to convince the news media this was a hoax."<sup>3</sup>

Hill and Knowlton also worked through the ACSH. Founded in 1978, the Council champions the position - completely at odds with accepted government testing procedures - that small amounts of chemicals in food are not harmful to human health, even when they are found to cause cancer in lab animals. ACSH has asserted that "there is no scientific evidence that DDT harms the environment" and that "dioxin was not such a bad actor after all." Whelan has written numerous books, published op-eds in dozens of newspapers and been interviewed widely on network TV. And in 1989, working with a \$25,000 grant from Uniroyal, Whelan coined the phrase "Alar hoax."

According to Washington Post media writer Howard Kurtz, "It was the great Alar scare of 1989 that boosted Whelan into the media stratosphere. . . . Television producers like Whelan because she's colorful and succinct, skewering her adversaries with such phrases as 'toxic terrorists' . . . and referring to their research as 'voodoo statistics.' Newspaper reporters often dial her number because she is an easily accessible spokesperson for the 'other' side of many controversies."<sup>4</sup>

Whelan also spent her corporate benefactors' money to hire the most credible figure in American broadcast journalism to shill for Alar. In 1990, former CBS-TV anchorman

Walter Cronkite was paid \$25,000 to narrate a syndicated television documentary, "Big Fears, Little Risks." The program featured only scientists who, as Cronkite described Whelan, "fear that overstating the risk of environmental chemicals is actually threatening the health of Americans." After Cronkite was informed of ACSH's corporate funding, he acknowledged to Kurtz that the program "was meant to be propaganda."

Between 1990 and 1995, ACSH held at least three press briefings on Alar at the National Press Club in Washington, D.C. Once Whelan became the poster child for the campaign, the widespread use of news databases, which allow reporters on deadline to quickly locate "facts" and "experts" cited in other news outlets' stories, contributed to the repetition of the myth. The Council's line is also parroted in the press releases and materials of other food and chemical industry groups such as the American Farm Bureau Federation, which helped finance the apple growers' lawsuit against NRDC and *60 Minutes*. A recent Farm Bureau op-ed argued against U.S. ratification of the Kyoto Climate Treaty by warning that "too many lives and livelihoods are at stake to allow global warming to become the Alar mistake of the '90s."

This misinformation campaign has been remarkably successful not just in reaching journalists, but their audience. In a 1991 poll by the Center for Produce Quality, another front group that boasts of being "solely supported by produce industry contributions," 68 percent of U.S. consumers said they believed the Alar crisis was overblown. Eighty-six percent said they had confidence in the safety of fresh fruits and vegetables - a higher percentage than before the Alar controversy.<sup>5</sup> But the same year, in preparation for the release of the National Academy of Sciences report, the Center warned its membership:

While most consumers now believe that the Alar scare was overblown, recent research reveals that consumers are still very vulnerable to scare messages that involve health risk to children. This seems particularly so when long-term cancer development is implied. Research also shows that consumers find health authorities most believable when it comes to information on food safety. Therefore, the release of the NAS study creates an opportunity for alarmists to engineer a major crisis in consumer confidence that could be devastating to our industry.<sup>6</sup> [Emphasis in original.]

The fallout of the Alar myth's acceptance is measured not only in public opinion, but in ill-informed and dangerous public policy. Since 1989, at least a dozen states have adopted "food libel" laws, allowing growers and food processors to sue journalists and public-interest groups for reporting on public health concerns that subsequently damage the market share of the commodity in question. Texas' food libel law was the basis for the cattle ranchers' suit against Oprah Winfrey, later dismissed by a jury. Time and time again, as these laws have been debated in state legislatures, the "Alar scare"

has been cited by food producers and lawmakers as proof of the problem. (Interestingly, some of the same papers whose news columns have referred to the "scare" have run editorials opposing food label laws as a threat to free speech.)

Aside from the facts of the case and the propaganda war waged by the food and chemical industries, there is a fundamental scientific issue to deal with: The argument by ACSH and other food industry apologists that tests linking Alar to cancer in lab animals are invalid because the animals were fed doses far in excess of the amount humans could ever ingest. At the time of the Alar controversy, the apple industry's most widely repeated claim was that a person would have to eat 28,000 pounds of apples a day for a lifetime to be at risk. This sounds convincing, but is based on exactly what the ACSH accused NRDC and 60 Minutes of: a basic misunderstanding of science.

In laboratory tests, high doses of chemicals are used on a relatively small number of animals because the other option - using tens of thousands of animals in each cancer study - is impractical and too expensive. If a chemical caused cancer at low doses in one out of every 10,000 people, it would cause 25,000 cases of cancer in the U.S. population - a clear public health disaster. In order to detect such a health threat using low doses, however, scientists would need to use about 100,000 animals per dose group. If a pesticide caused cancer in 1 out of every 10,000 people at the doses found in food, a study using 200 animals and similar doses would not reveal any toxic effect at all.

Instead, scientists use several hundred animals per dose group, but increase the doses to determine if there is any toxic effect. Research on cancer risks is based on a linear dose-response curve, which holds that if a high dose of a chemical causes cancer in a large percentage of a limited sample of test subjects, a smaller dose will also cause cancer in a smaller percentage of a large exposed population.

In an unpublished letter to the Times' Brody after last August's column, Dr. Herbert L. Needleman, professor of pediatrics at the University of Pittsburgh and a member of the EPA's Science Advisory Panel for Pesticides, wrote that the argument against high-dose animal testing is "an old industry ruse . . . [part of] a well orchestrated campaign to persuade science writers and the general public that environmental risks are overstated." Needleman added:

To test the toxicant at low doses - like that a child would get in his diet of apples and juice - would require thousands of rats. So the strategy is to reduce the number of subjects and push the dose to high levels. Then, by statistics, the effect is modeled and risk estimates for lower doses [are] made. Modeling is not an exact science, but it is a useful guide. . . . In the real world, Alar was ingested by millions of children. Even if at low doses the effect is infrequent, large numbers of children would get the disease.

How serious was the health risk from Alar? The EPA first estimated the lifetime risk at 50 cancers in 1 million people, and later revised that estimate to 23 in 1 million. Consumer Reports, which in 1989 conducted its own tests for Alar in apples, reported that 22 percent of the mice given a high dose of the chemical in Uniroyal's own tests developed cancer before the study was even half completed. Based on that finding, Consumers Union, the research organization that publishes Consumer Reports, estimated that a child who drank an average of 10 ounces of apple juice a day between his or her first and fifth birthdays would face a lifetime cancer risk of between 5 in 1 million and 50 in 1 million. Since the government considers a 1 in 1 million risk a significant public health concern, the risk from Alar was between 5 and 50 times the level that has triggered bans on other chemicals.

Finally, some food-industry apologists concede that Alar poses some level of risk, but argue that NRDC still acted irresponsibly, plotting with a public relations advisor and "*60 Minutes*" to tell the story in a way that caused consumer panic. This claim simply does not hold up to scrutiny. In 1992, in a ruling dismissing the growers' suit, U.S. District Judge William F. Nelson wrote that NRDC's report "is not a polemical tract preying on raw emotions and irrational fears. There are no theatrics, no histrionic expressions of outrage and no visual or auditory hyperbole . . ." The judge also criticized the EPA's failure to take into account the increased susceptibility of children to chemicals in food, writing: "[T]he government is in grievous error when allowable exposures are calculated based on probable lifetime contact without regard for the age at which exposure occurs."

A review of both the NRDC report and the *60 Minutes* coverage of it shows that the story was not only, or even primarily, about apples and Alar. Instead, it was about the government's failure to protect the nation's food supply from hazardous chemicals. Alar was cited as a prominent example of a failed regulatory system, but certainly not the only one.

Today, Alar is gone, but the system is still a failure.

As the new EWG report *How 'Bout Them Apples?* shows, children are still exposed to unacceptable health risks merely by consuming apples and other fruits and vegetables. An EWG computer analysis of the latest government data found that more than 4,000 American children age five and under eat a combination of 25 different pesticides on any given day. Among these chemicals are compounds that can affect the development of children's brains and nervous systems, cause cancer, disrupt the endocrine system and pose other health risks. Yet no government standards have been set to protect infants, children - or anyone else - from the multiple pesticide exposures they experience every day.

Ten years after the "Alar scare" - ten years into the news media's uncritical acceptance of the Alar myth - both the government and the media would do well to heed Dr. Needleman's admonition to Jane Brody: "You can do better."

## Notes

<sup>1</sup> Elizabeth Whelan, "Confidential Update on Alar, 3rd year anniversary, quest to interest '60 Minutes' in a revisit." American Council on Science and Health, Feb. 20, 1992. (Cited in Rachel's Environment & Health Weekly #534, Feb. 20, 1997.)

<sup>2</sup> News and Comment, October 1991. (Cited by NRDC in "Myth and Fact About ACSH Misinformation Campaign and NRDC's Report, 'Intolerable Risk,' " September 1993.)

<sup>3</sup> Elliott Negin, "The Alar 'Scare' Was For Real," Columbia Journalism Review, September/October 1996.

<sup>4</sup> Howard Kurtz, "Dr. Whelan's Media Operation," Columbia Journalism Review, March/April 1996.

<sup>5</sup> "Alar's Health Risks Revised," International Food Information Center, [www.ificinfo.health.org](http://www.ificinfo.health.org), February 1999.

<sup>6</sup> Center for Produce Quality, "Dear Association Member," Sept, 16, 1991.

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