

Insecticide to be banned – three decades after tainted melons sickened 2,000 people

Twenty-five years after the worst known outbreak of pesticide poisoning in U.S. history, an agreement is announced that phases out all uses of aldicarb. Manufacturer Bayer CropScience agreed to stop producing the highly toxic insecticide, used to kill pests on cotton and several food crops, by 2015 in all world markets. Use on citrus and potatoes will be prohibited after next year. New EPA documents show that babies and children under 5 can ingest levels of the insecticide through food and drinking water that exceed limits that the agency considers safe. “Aldicarb no longer meets our rigorous food safety standards and may pose unacceptable dietary risks, especially to infants and young children,” the EPA said. At least 2,000 people fell ill from eating California watermelons illegally contaminated with aldicarb on the Fourth of July in 1985. “It is good the revocation is happening; it is a shame it took 20 years,” said Richard Jackson, chair of environmental health sciences at UCLA, who was a top state health official during the outbreak.

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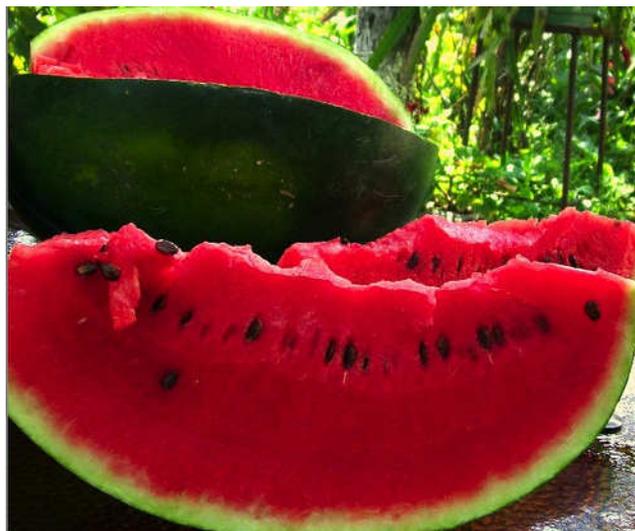
A farm chemical with an infamous history – causing the worst known outbreak of pesticide poisoning in North America – is being phased out under an agreement announced Tuesday by the Environmental Protection Agency.

Manufacturer Bayer CropScience agreed to stop producing aldicarb, a highly toxic insecticide used to kill pests on cotton and several food crops, by 2015 in all world markets. Use on citrus and potatoes will be prohibited after next year.

Tuesday’s announcement comes 25 years after a highly publicized outbreak of aldicarb poisoning sickened more than 2,000 people who had eaten California watermelons.

New EPA documents show that babies and children under five can ingest levels of the insecticide through food and water that exceed levels the agency considers safe.

“Aldicarb no longer meets our rigorous food safety standards and may pose unacceptable dietary risks, especially to infants and young children,” the EPA said in announcing the agreement.



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Aldicarb is being banned three decades after 2,000 people fell ill from California watermelons illegally contaminated with the pesticide.

For infants, consumption of aldicarb residue – mostly in potatoes, citrus and water – can reach 800 percent higher than the EPA’s level of concern for health effects, while children between the ages of one and five can ingest 300 percent more than the level of concern, according to an Aug. 4 EPA memo.

In a statement, Bayer CropScience said Tuesday that its decision to agree to phase out aldicarb came after EPA’s new report calculated the health risks to children.

The company said it “respects the oversight authority of the EPA and is cooperating with them” even though it “does not fully agree” with the agency’s new assessment. Bayer CropScience stressed that the analysis “does not mean that aldicarb poses an actual risk” to consumers.

One of the most acutely hazardous pesticides still used in the United States, aldicarb is a carbamate insecticide that is taken up by roots and carried into the fruit of a plant. High levels of aldicarb can have neurotoxic effects; it inhibits an enzyme that controls the transmission of messages to nerves.

“After thousands of poisonings, it is mind-boggling that aldicarb is still in use,” said Steve Scholl-Buckwald, managing director of the environmental group Pesticide Action Network North America. “The wheels just grind so, so slowly. It never should have been registered in the first place back in 1970 and by the mid-1980s there was sufficient data to suggest it should have been taken off the market.”

On the Fourth of July in 1985, three people who had eaten watermelon in Oakland, Calif., rapidly became ill with symptoms that included vomiting, diarrhea, muscle twitches and abnormally slow heart rates. At the same time, people in Oregon were falling ill, too, and tests of watermelons found extremely high levels of aldicarb, which was illegal to use on all melons.

California ordered an immediate ban on watermelon sales, which meant huge quantities had to be destroyed in fields and at stores at the height of the season. How aldicarb got into watermelons remains unknown, but experts suspected that some melon farmers used low levels of it intentionally and illegally and that some also might have flowed off nearby cotton fields.

New EPA documents show that babies and children under five can ingest levels of the insecticide through food and water that exceed levels the agency considers safe.

That summer, a total of 1,350 cases of aldicarb poisoning from watermelon were reported in California, plus another 692 cases in eight other states and Canada, according to a report by the U.S. Centers for Disease Control and Prevention. Seventeen people were hospitalized. Six deaths and two stillbirths were reported in people who fell ill, but the pesticide was not listed as the cause of death in coroner

reports.

To date, it remains the largest case of pesticide food poisoning documented in North America.

Richard Jackson, who was a top official in California’s health department at the time of the watermelon poisonings, testified at a U.S. Senate hearing back in 1991 that aldicarb posed a health risk to children and that regulations offered an inadequate margin of safety.

“It is good the revocation is happening; it is a shame it took 20 years,” said Jackson, now chair of environmental health sciences at UCLA.

Dr. Lynn Goldman, an environmental health professor at Johns Hopkins University’s Bloomberg School of Public Health, also welcomed the agreement, noting that aldicarb has been under special review at the EPA for more than 25 years.

“It is good to see that EPA and Bayer have now reached an agreement to phase out the remaining uses,” Goldman said Tuesday.

Goldman was an epidemiologist with California’s health department when the outbreak occurred.



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Babies and children ingest aldicarb mainly through citrus, potatoes and water.

“As a state health official, I wanted to see stronger action on aldicarb,” she said, adding that she and Jackson “recommended that aldicarb be banned in California, because of its potency and what seemed to be a large temptation for misuse. We obviously did not prevail.”

Aldicarb was the first of the so-called “dirty dozen” pesticides that Pesticide Action Network targeted in 1985 for worldwide ban. At the time, it was found in bananas and in well water on Long Island, NY.

Scholl-Buckwald said that the EPA relies mostly on voluntary agreements, instead of bans, to avoid lawsuits from

manufacturers.

“The system is designed to leave things like this on the market as long as possible. It’s innocent until proven guilty. It’s really unconscionable that it takes literally decades to do this,” he said.

Goldman in 1993 was named EPA assistant administrator overseeing pesticide programs, but she said Tuesday that even then, her efforts to restrict aldicarb were hamstrung by insufficient scientific evidence at the time and a weak pesticide law. She said she faced “the need to exercise due process in making sure that the company producing the chemical had a fair hearing.”

Years later, in 2007, the EPA concluded that there were “potential human health risks” from drinking-water contamination, as well as risks to birds and other wildlife. But the agency approved its continued use with added precautions, such as increased setbacks between fields and water wells and reduced amounts applied to crops.

Aldicarb was the first of the so-called “dirty dozen” pesticides that an environmental group, Pesticide Action Network North America, targeted in 1985 for worldwide ban.

Then, this month, the EPA revised its analysis using new toxicity data and determined that current uses meant babies and young children were at risk of being exposed to levels in water and food that exceeded the agency’s level of concern.

Aldicarb residues are found in grapefruit, oranges, orange juice, potatoes, frozen French fries and sweet potatoes. It already has been banned in bananas because of the potential for high exposure in children.

In the new analysis, children’s exposure from drinking water was estimated based on aldicarb use at cotton and peanut farms in Georgia.

“Potatoes, citrus and water are the greatest contributors to the aldicarb exposure,” the EPA document says.

Bayer researchers recently reported that water contamination has been minimal. They analyzed 1,673 drinking-water wells that were within 300 meters of fields treated with aldicarb, which has the trade name Temik, and found that none violated the EPA’s health advisory limit.

“For nearly 40 years, Temik has provided farmers with unsurpassed control of destructive pests, without compromising human health or environmental safety,” Bill Buckner, president and CEO of Bayer CropScience, said in a statement Tuesday.



While it is known that high exposure can cause vomiting, diarrhea and neurotoxic effects, the potential for chronic health effects from low exposure remains poorly understood. It is not carcinogenic, although researchers found a high rate of colon cancer in pesticide applicators exposed to high levels.

Its use has steeply declined in the U.S. over the past couple of decades, particularly on food crops. It is currently legal to use only on citrus, potatoes, dry beans, peanuts, soybeans, sweet potatoes, sugar beets and cotton. Its main use is to kill mites and nematodes on cotton, potatoes and citrus.

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Bayer CropScience's decision to agree to phase out aldicarb came after EPA's new report calculated the health risks to children.

In 2008, about 75,000 pounds were applied to California crops – almost entirely cotton - compared with more than half a million pounds in 1998, according to state Department of Pesticide Regulation data.

Union Carbide was the sole manufacturer of aldicarb until 1987. Its plant in Bhopal, India, was making aldicarb when a pesticide called methyl isocyanate leaked, killing several thousand people in 1984.

Aldicarb already has been banned in Europe, although it is still used, and perhaps manufactured, in other countries.

Under the new agreement, Bayer, the sole U.S. manufacturer, said its distribution will end by 2017. Use on citrus and potatoes will be banned beginning in 2012, and all remaining uses will end in 2018. In the meantime, new requirements will go into effect to change labeling and to protect ground water near cotton, soybean and peanut farms.

“We recognize the significant impact this decision will have on growers and the food industry, and will do everything possible to address their concerns during this transition,” Buckner said. He added, “We recognize the loss of this tool to growers and will seek innovative solutions to fill this void.”

But Scholl-Buckwald said he was disappointed that the agreement didn't have earlier deadlines.

“After 40 years, the question is why should there be a phaseout period at all,” he said.

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