



Chlordane no longer used in North America

The use of chlordane has been eliminated in Canada, Mexico and the United States as a result of a North American Regional Action Plan (NARAP) negotiated by the three countries through the Commission for Environmental Cooperation (CEC) of North America.

What is chlordane?

Chlordane is a pesticide that was widely used in North America on crops, lawns, gardens and forests in the 1950s, '60s and '70s. It was also used to control termites. Severe restrictions were placed on most uses of chlordane in Canada and the United States in the mid-1970s. Most applications of the substance were prohibited in the 1980s, and its use was phased out completely by both countries by 1995.

In 1988, Mexico listed chlordane as a restricted pesticide. From 1992 to 1996, 212.8 tonnes of chlordane were imported into Mexico from the United States. By 1997, the use of chlordane in Mexico was limited to urban application for the control of termites. The sole US manufacturer of chlordane has since voluntarily ceased production.

The NARAP was developed as a basis for coordinated regional action to eliminate the use of chlordane in Canada, Mexico, and the United States. Mexico committed to a phase-out of remaining uses of chlordane with full scientific and technical support from Canada and the United States. The North American regional coordination efforts on chlordane have contributed to global consideration of chlordane. In 1997, the Intergovernmental Forum on Chemical Safety agreed there was sufficient evidence to take international action to restrict and reduce the use of chlordane. The substance was included in negotiations for the Stockholm Convention, a legally binding international agreement on the "dirty dozen" persistent organic pollutants (POPs) that was signed by more than 100 countries in May 2001.

Chlordane is now no longer registered for use in Canada, Mexico, or the United States and it is no longer manufactured in North America.

The chlordane NARAP

Chlordane was one of the first targets of the CEC's Sound Management of Chemicals (SMOC) initiative when it was launched. Canada, Mexico, and the United States approved the North American Regional Action Plan (NARAP) on chlordane in 1997 with a goal of phasing out registered uses of the substance by 1998. The goals of the NARAP were achieved, and the Implementation Task Force on Chlordane will be disbanded.

The NARAP included a number of specific regulatory and administrative actions that were taken by Canada, Mexico, and the United States:

- The United States encouraged industry to voluntarily phase out the production of chlordane.
- Canada and the United States worked closely with Mexico to provide available risk assessments for suitable alternatives to chlordane.
- Canada and the United States continued to provide support for hazardous waste collection programs that included chlordane. Information on these programs was shared with Mexico, which in turn administered its own hazardous waste collection program.
- All three countries reported publicly available data on the use, production, importation and exportation of chlordane.
- Canada, Mexico, and the United States made annual reports on progress achieved under the NARAP.



The NARAP also included a three-phase regulatory program specific to Mexico

Phase I included:

- The development of an integrated control strategy that included a pesticide life-cycle analysis, identification of alternatives to chlordane and government support for research;
- Encouraging stakeholders to participate in the development of control strategies and the identification of safer alternatives;
- Banning imports of pesticides whose use is prohibited by the exporting country;
- Limits on sales to authorized, trained personnel and restrictions regarding their use; and
- Making information available to the public on the scope and purpose of the NARAP.

Phase II included:

- Environmental monitoring and risk assessment to establish a baseline geographical area where chlordane was used extensively;
- Monitoring of existing stocks by distributors and retailers; and
- Prohibition of the sale of the technical and active ingredients for making chlordane.

Phase III included:

- Prohibiting the formulation of chlordane by January 1998;
- Prohibiting the use of chlordane by December 1998; and
- Continued monitoring of existing stocks by distributors and retailers.

The implementation of the NARAP on chlordane is a real success story. The NARAP brought high-level public and governmental attention to the chlordane issue, and consequently, the substance is no longer registered for use in Canada, Mexico, and the United States.

More information can be found at: http://www.cec.org/programs_projects/pollutants_health/smoc/

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Effects of chlordane

Chlordane is a persistent, bioaccumulative, toxic substance. It degrades very slowly in the environment and can stay in soil for over 20 years. Chlordane can be transported over long distances through the atmosphere and has been detected in groundwater and in the Arctic.

Chlordane has been rated as a probable human carcinogen. High levels of chlordane can cause damage to the nervous system or liver. It is also known to affect the endocrine system and digestive system. It can cause behavioral disorders in children if they were exposed before birth or while nursing. Exposure to chlordane can come from eating contaminated foods or by exposure to contaminated soil. Chlordane has also been shown to be toxic to non-target species, including birds, fish, bees and earthworms.



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Commission for Environmental Cooperation of North America
393, rue St-Jacques Ouest, bureau 200, Montréal (Québec) Canada H2Y 1N9
Tel: (514) 350-4300
Fax: (514) 350-4314
info@ccemtl.org • www.cec.org