

Trichlorfon Facts

EPA has assessed the risks of trichlorfon and reached a decision presented in the "Report on FQPA Tolerance Reassessment Progress and Interim Risk Management Decision for Trichlorfon" (commonly known as a TRED) for this organophosphate (OP) pesticide. With the risk mitigation measures required, trichlorfon fits within its own "risk cup"; its individual, aggregate risks are within acceptable levels.

EPA's next step under the Food Quality Protection Act (FQPA) is to consider the cumulative risks of all the OP pesticides, which share a common mechanism of toxicity. The interim decision on trichlorfon cannot be considered final until these cumulative risks are considered. Further risk mitigation may be required at that time.

EPA is reviewing the OP pesticides to determine whether they meet current health and safety standards. Other OPs need decisions about their eligibility for reregistration under FIFRA. OPs with food, drinking water, and other non-occupational exposures must be reassessed to make sure they meet the new FFDCA safety standard, brought about by the FQPA.

The trichlorfon TRED was developed through the OP pilot public participation process, which increases transparency and maximizes stakeholder involvement in EPA's development of risk assessments and risk management decisions. EPA worked extensively with affected parties to reach the decisions presented in this TRED document, which concludes the OP pilot process for trichlorfon.

Uses

- An insecticide, trichlorfon is used on golf course turf, home lawns, non-food contact areas of food and meat processing plants, ornamental shrubs and plants, and ornamental and bait fish ponds to control insects such as lepidopteran larvae (caterpillars), white grubs, mole crickets, cattle lice, sod webworms, leaf miners, stink bugs, flies, ants, cockroaches, earwigs, crickets, diving beetle, water scavenger beetle, water boatman backswimmer, water scorpions, giant water bugs and pillbugs. Trichlorfon is also used overseas on cattle as a pour-on treatment.
- Average domestic usage of trichlorfon is about one million pounds active ingredient (a.i.) per year. In terms of pounds a.i., total usage is allocated mainly to lawn care operators (74%) and golf courses (18%). However, on average, less than 2% of all turf sites are treated with trichlorfon. Other sites with small usage include landscaping, institutional turf, turf farms, nursery/greenhouse, livestock and general farm use. Application rates per acre on these sites are generally less than 7 pounds a.i. per acre.

Health Effects

- Trichlorfon can cause cholinesterase inhibition in humans; that is, it can overstimulate the nervous system causing nausea, dizziness, confusion, and at very high exposures (e.g., accidents or major spills), respiratory paralysis and death.

Risks

- Dietary risks from food alone for both acute and chronic exposure are not of concern to the Agency. When surface water is considered as the source of drinking water, dietary risks (food and water) exceed the Agency's level of concern for children 1 - 6 years. However, the Agency believes that mitigation measures required in this TRED decision, and the fact that trichlorfon

has a short half life, will reduce the exposure. Moreover, when the source of drinking water is groundwater, neither the acute nor the chronic dietary risk exceed the Agency's level of concern. Accordingly, aggregate risk with groundwater also does not exceed Agency concern.

- The current occupational risk assessment indicates risk concerns for pond applicators, applicators using broadcast treatment to golf course fairways, and postapplication worker concerns following foliar treatments of ornamentals. Risks to workers are of concern if personal protective equipment is not used, or application methods are not modified.
- However, the Agency believes that required mitigation will effectively reduce exposure and risk to a level that is not of concern to the Agency.

Risk Mitigation

- To mitigate risks to handlers and workers:
- Prohibit broadcast treatment to golf course fairways; spot treatment to fairways is permitted.
- Require 7-day application interval for application to turf, and limit applications to no more than 3 per calendar year
- Require applicators to use a truck-drawn spray rig for ornamental fish and bait ponds over 1 acre.
- Prohibit foliar application to ornamentals; allow only direct soil spray application to base of plant.

The OP Pilot Public Participation Process

The organophosphates are a group of related pesticides that affect the functioning of the nervous system. They are among EPA's highest priority for review under the Food Quality Protection Act.

EPA is encouraging the public to participate in the review of the OP pesticides. Through a six-phased pilot public participation process, the Agency is releasing for review and comment its preliminary and revised scientific risk assessments for individual OPs. (Please contact the OP Docket, telephone 703-305-5805, or see EPA's web site, [Pesticide Reregistration Status](#).)

EPA is exchanging information with stakeholders and the public about the OPs, their uses, and risks through Technical Briefings, stakeholder meetings, and other fora. USDA is coordinating input from growers and other OP pesticide users.

Based on current information from interested stakeholders and the public, EPA is making interim risk management decisions for individual OP pesticides, and will make final decisions through a cumulative OP assessment.

Next Steps

- Numerous opportunities for public comment were offered as this decision was being developed. The trichlorfon TRED therefore is issued in final (see <http://www.epa.gov/pesticides/reregistration/status.htm> or http://www.epa.gov/pesticides/reregistration/status_op.htm), without a formal public comment period. The docket remains open, however, and any comments submitted in the future will be placed in this public docket.
- When EPA has considered the cumulative risks for of the OP pesticides, the Agency will issue its final tolerance reassessment decision for trichlorfon and may require further risk mitigation

measures. Similarly, the Agency may reconsider any part of this interim decision based on new information which may come to the Agency's attention. For all OPs, tolerances will not be raised or established until cumulative risks have been considered.