



## Pesticides: Reregistration



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# Fenamiphos Facts

EPA 738-F-08-005  
June 2008

EPA assessed the risks of fenamiphos and completed an Interim Reregistration Eligibility Decision (IRED) document for this organophosphate (OP) pesticide in 2002. The IRED identified risk mitigation measures needed to reduce risk, as well as data needed to better characterize risks. The sole registrant, Bayer Corporation, requested voluntary cancellation and phase-out of all existing fenamiphos registrations rather than committing to develop additional data. EPA approved this request.

Used on a variety of vegetables and fruits, fenamiphos residues in food do not pose risk concerns. However, exposure to drinking water sources from shallow water tables (less than 50 feet deep) and extremely vulnerable soils do pose risk concerns. Extremely vulnerable soils are defined as, "hydrologic soil group A soils that are excessively drained and predominantly sand or loamy sand, such as soils in the suborder psamments." These classifications and soil taxonomy refer to USDA definitions. Therefore, all uses of fenamiphos in areas with extremely vulnerable soils and shallow water tables were phased out by May 31, 2005.

Fenamiphos is not used in residential settings. It is, however, used on turf including golf course turf, which could lead to golfer exposure from residues on treated courses. Nevertheless, the Agency believes that the watering-in of fenamiphos adequately protects golfers. Implementation of risk mitigation during the phase out, negotiated between the registrant and the Agency, is believed to decrease the risks associated with fenamiphos.

EPA has considered available information on the cumulative risk of the OP pesticides, which share a common mechanism of toxicity, as required by the Food Quality Protection Act (FQPA). The tolerance reassessment decision for fenamiphos has been proposed in a *Federal Register* notice dated February 6, 2008 (FRL-8345-2). This notice proposes that all domestic tolerances are to be revoked by December 31, 2009. The notice also proposes that several commodities treated with fenamiphos will continue to have import tolerances: banana; fruit, citrus, group 10; garlic; grape; and pineapple.

The fenamiphos decision was made 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 the IRED document. The agreement on the voluntary cancellation, based on the registrant's decision not to develop data that were an essential part of the risk mitigation proposal, concludes the Agency's reregistration review of fenamiphos.

### Uses

- A nematicide and an insecticide, fenamiphos has been used primarily to control nematodes and thrips on various agricultural crops (i.e., citrus, grapes, peanuts, pineapples, tobacco, etc.) and non-agricultural (i.e., turf and ornamentals) sites. Additionally, all uses have been soil incorporated, except for the pineapple use. There are no residential uses for fenamiphos.
- Annual domestic use was low-- approximately 780,000 pounds of active ingredient per year..
- Fenamiphos is a Restricted Use Pesticide (RUP) due to high acute toxicity and toxicity to wildlife.

### Health Effects

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Fenamiphos 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 (acute and chronic) exposures from eating commodities treated with fenamiphos are below the Agency's level of concern for the entire U.S. population, including infants and children.
- Dietary (drinking water) exposures are generally not of concern for surface and ground water sources in soils that are not extremely vulnerable. However, exposure to shallow ground water sources of drinking water associated with soils that are extremely vulnerable exceed the Agency's level of concern.
- EPA has risk concerns for workers who mix, load, and/or apply fenamiphos to agricultural sites and golf courses.
- Acute and chronic risks exceed the Agency's level of concern for terrestrial, aquatic, and endangered species.

## Risk Mitigation

- The registrant requested voluntary cancellation of existing fenamiphos product registrations with a 5-year phase out. A Use Deletion and Product Cancellation Order (FRL-7332-5) (68 FR 68901) for fenamiphos was published in the *Federal Register* on December 10, 2003, announcing that EPA granted the registrant's request.
- The registrant agreed to cancel use, and formulation for use, of all of its existing fenamiphos registrations in areas with extremely vulnerable soils and shallow water tables effective May 31, 2005.
- The registrant agreed to produce no more than 500,000 pounds of fenamiphos manufacturing use products for use in the United States during the first year of the phase out which ended May 31, 2003. In each subsequent year of the 5-year phase out, production was reduced by 20% of the previous year's production.
- All fenamiphos product registrations were cancelled and sale and distribution of manufacturing and end-use products by the registrant were prohibited effective May 31, 2007.
- Sale and distribution of all existing stocks by persons other than the registrant were to be prohibited effective May 31, 2008. However, as announced in an Amendment to Use Deletion and Product Cancellation Order published in the *Federal Register* on June 11, 2008 (FRL-8368-2), persons other than the registrant are allowed to continue to sell and distribute two fenamiphos products, Nemaicur 10% Turf and Ornamental Nematicide (EPA Reg. No. 432-1291) and Nemaicur 3 Emulsifiable Systemic Insecticide-Nematicide (EPA Reg. No. 264-731) until November 30, 2008.
- Revised labels for all fenamiphos products were submitted to the Agency in accordance with the registrant's request for an amendment of all of its existing registrations.
- Use of existing stocks in the channels of trade may continue until depleted, except where prohibited by the revised labels.

## Next Steps

- Numerous opportunities for public comment were offered as this decision was being developed. The fenamiphos IRED document was issued in final (see [www.epa.gov/pesticides/reregistration/status.htm](http://www.epa.gov/pesticides/reregistration/status.htm)), without a formal public comment period. However, the docket remains open, and any comments submitted in the future will be placed in this public docket.
- A copy of the Interim RED and all supporting documents are available on the Agency's website at [www.epa.gov/pesticides/reregistration/status.htm](http://www.epa.gov/pesticides/reregistration/status.htm).

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[http://www.epa.gov/pesticides/reregistration/REDs/factsheets/fenamiphos\\_ired\\_fs.htm](http://www.epa.gov/pesticides/reregistration/REDs/factsheets/fenamiphos_ired_fs.htm)  
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