

Naled Facts

EPA 738-F-02-007

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EPA has assessed the risks of naled and reached an Interim Reregistration Eligibility Decision (IRED) for this organophosphate (OP) pesticide. Provided that risk mitigation measures are adopted naled fits into its own "risk cup"-- its individual, aggregate risks are within acceptable levels. Naled also is eligible for reregistration, pending a full reassessment of the cumulative risk from all OPs.

Used mainly to control mosquitos and to control insects on a variety of agricultural crops, naled residues in food and drinking water do not pose risk concerns. Naled may no longer be used in and around the home by residents or professional applicators. However, residents can be exposed as bystanders from wide-area mosquito control applications. Sergeant's, the sole end-use registrant for pet collars, is voluntarily cancelling all of its naled products. With mitigation limiting homeowners' and children's exposure naled fits into its own "risk cup." With other mitigation measures, naled's worker and ecological risks are also will be below levels of concern for reregistration.

EPA's next step under the Food Quality Protection Act (FQPA) is to complete a cumulative risk assessment and risk management decision encompassing all the OP pesticides, which share a common mechanism of toxicity. The interim decision on naled cannot be considered final until this cumulative assessment is complete. Further risk mitigation may be warranted at that time.

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

The naled interim 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 this interim decision document, which concludes the OP pilot process for naled.

Uses

- An insecticide, naled is used primarily to control adult mosquitos. It is also registered to control blackflies, and leaf eating insects on a variety of fruits, vegetables, and nuts.
- Annual domestic use is approximately 1,000,000 pounds of active ingredient, with approximately 70% used in mosquito control and approximately 30% in agriculture.

Health Effects

- Naled 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 exposures from eating food crops treated with naled are below the level of concern for the entire U.S. population, including infants and children. Drinking water is not a significant source of exposure.
- The only remaining residential risks have been addressed by the voluntary cancellation of naled pet collar products.
- EPA also has risk concerns for workers who mix, load, and/or apply naled to agricultural sites, and for black fly control.
- Acute and chronic risks are of concern for fish and other freshwater organisms.

Risk Mitigation

In order to support a reregistration eligibility decision for naled, the following risk mitigation measures are necessary:

To mitigate risks to agricultural workers:

- Require closed mixing/loading systems for all agricultural uses (except greenhouses and hand-held application) and public health uses involving control of mosquitos and black flies.
- Require enclosed cabs for ground application or enclosed cockpits for aerial application, for all agricultural uses and public health uses involving control of mosquitos and black flies.
- Prohibit manual activation of hotplates.
- Prohibit manual activation of ventilation equipment in greenhouses.
- Delete backpack sprayers and hand-held foggers.
- Delete the greenhouse heat/steam pipe painting use.
- Delete use in apartments, motels, hotels and drive-in theaters.
- Reduce the maximum application rate for use on almonds and peaches to 1.875 lbs ai/A and prohibit aerial use on almonds and peaches.
- Prohibit ready to use formulation.
- Delete wet and dry bait uses.
- Delete spot treatment for cockroach control.
- Prohibit human flaggers.
- Establish 48 hour reentry intervals after application to field crops.
- Establish 24 hour reentry intervals after application in greenhouses.

To mitigate risk to residents and children, the following measures are needed:

- The sole manufacturer of pet collars (Sergeant's) has requested voluntary cancellation of these uses.
- Prohibit all residential uses either by resident or professional applicator. Use in residential areas by mosquito control districts would still be allowed.

To mitigate risk to non-target species:

- Reduce application rates for control of black fly from 0.25 to 0.1 lbs/ai/A, and reduce rates on peaches and almonds from 2.8 to 1.875 lbs/ai/A.
- Require buffer zones around permanent bodies of water to reduce runoff.
- Establish spray setbacks to reduce spray drift for agricultural uses.

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 Naled IRED therefore is issued in final (see [Pesticide Tolerance Reassessment and Reregistration](#) or [Pesticide Reregistration Status](#)), 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 the cumulative risk assessment for all organophosphate pesticides is completed, EPA will issue its final tolerance reassessment decision for naled and may request further risk mitigation measures. However some tolerance actions for naled will be undertaken prior to completion of the final tolerance reassessment, including lowering of tolerances, changing of commodity definitions, and other administrative actions. For all OPs, raising and/or establishing tolerances will be considered once cumulative risk is considered.