



Chlorpyrifos Revised Risk Assessment and Agreement with Registrants

Action and Rationale

EPA has released its revised risk assessment and announced an agreement with registrants to eliminate and phase out certain uses of the organophosphate pesticide chlorpyrifos. Also known as Dursban, Lorsban, and other trade names, chlorpyrifos is one of the most widely-used insecticides in the U.S., both in agriculture and in and around the home.

The Food Quality Protection Act, enacted in 1996, sets a more stringent safety standard for most pesticides and offers special protection for children. In meeting the tough safety standard, EPA believes it can do a better job of protecting children and others by further reducing exposure to chlorpyrifos, and providing the increased margins of safety now mandated by Federal law. These use modifications also will improve safety for workers who apply chlorpyrifos and for the environment.

Risk Mitigation

EPA and the registrants have agreed to the following modifications:

Ž Reducing Food Risks... The agreement will expeditiously address food uses posing the greatest risks to children. It decreases the use of chlorpyrifos on apples, terminating or canceling all post-bloom applications, and cancels the use on tomatoes. EPA will also propose to 1) lower the tolerance or maximum residue limit on apples to reflect this change in use, 2) revoke the tolerance on tomatoes, and 3) lower the tolerance on grapes to a level that will allow for

dormant applications (the only use allowed domestically), but not foliar applications typically made in foreign countries on grapes that are imported into the U.S. These actions will reduce acute dietary risk by 75 percent, effectively eliminating dietary risk concerns for children and others.

Ž Reducing Residential Risks... About 50 percent of chlorpyrifos is used in and around the home. The agreement will cancel and phase out nearly all indoor and outdoor residential uses. It effectively eliminates the use of chlorpyrifos by homeowners, limiting use to certified, professional, or agricultural applicators. Those uses that pose the most immediate risks to children, including home lawn, indoor crack and crevice treatments, and whole house "post-construction" termiticide treatments, will be canceled first. Spot and local post-construction and pre-construction termiticide uses will be phased out over the next several years.

Ž Reducing Drinking Water Risks... The actions on residential uses also will reduce exposure to chlorpyrifos through drinking water, since residential applications are potentially a major source of drinking water contamination.

Ž Reducing Non-Residential Risks... Chlorpyrifos use in schools, parks, and other settings where children may be exposed will be canceled. Only use in some limited commercial settings, like warehouses, ship holds and railroad boxcars, may continue.

Ž Reducing Worker Risks... Risks to

workers who apply chlorpyrifos also are of concern. The agreement will help mitigate worker risks by implementing Restricted Entry Intervals (REIs) for agricultural uses. By August 1, 2000, chlorpyrifos registrants also will be proposing lower application rates, lower frequencies of treatment, and longer time periods between applications and harvest (pre-harvest intervals) for some agricultural uses. These and other measures to reduce both worker and ecological risks will be discussed further in consultation with stakeholders as EPA develops an interim reregistration eligibility decision for chlorpyrifos.

Ž Protecting Public Health Uses... Under the agreement, public health uses including applications to fire ant mounds and ultra low volume applications for mosquito control will be allowed to continue. These applications do not pose risks of concern and provide important public health benefits.

Ž Supporting Low-Risk Uses... The agreement allows several other non-agricultural uses to continue, with appropriate risk mitigation. Golf course applications, for example, may continue with application rates reduced by 75 percent. Low risk uses like containerized baits in child resistant packaging, and non-structural wood treatments such as treatments of utility poles and fenceposts, will not be affected by the agreement.

Phased In Approach

The agreement phases in the various restrictions and cancellations to address higher risk uses of chlorpyrifos first. Because much of the risk reduction involves increasing margins of safety, it is reasonable to focus first on the uses that achieve the greatest risk reduction for children. Allowing other uses to continue for a specific period of time will help ensure that appropriate alternatives are available for a reasonable and orderly transition.

Provisions of the Agreement and Associated EPA Actions

Food Uses		
Crop	Mitigation Measures	Effective Dates
Apples	Production of chlorpyrifos products labeled for post-bloom application is prohibited (only production for pre-bloom, dormant application is allowed) Post-bloom use is prohibited Tolerance will be lowered	August - September 2000 Stop use (use prohibited) as of 12-31-00
Tomatoes	Production of products for tomato use is prohibited Use will be canceled Tolerances will be revoked	August - September 2000 Stop use as of 12-31-00
Grapes	Tolerance will be lowered	

Food Uses		
All Agricultural Uses	Classify new end-use products for restricted use or package in large containers	As of 12-1-00
	New end-use products must bear revised Restricted Entry Intervals (REIs)	As of 12-1-00

Home Uses		
Site	Mitigation Measures	Effective Dates
Home lawn and most other outdoor uses	Classify new end-use products for restricted use or package in large containers (except baits in child resistant packaging) Use will be canceled	As of 12-1-00 Stop formulation 12-1-00 Formulators stop sale 2-1-01 Retailers stop sale 12-31-01
Crack and crevice and most other indoor uses	Classify new end-use products for restricted use or package in large containers Use will be canceled	As of 12-1-00 Stop formulation 12-1-00 Formulators stop sale 2-1-01 Retailers stop sale 12-31-01
Termiticides ' Full barrier (whole house) post-construction use ' Spot and local post-construction use ' Pre-construction use	Classify new products for restricted use or package in large containers Limit use to 0.5% solution Use will be canceled Use will be canceled Use will be canceled	As of 12-1-00 In label directions as of 12-1-00 Stop formulation 12-1-00 Formulators stop sale 2-1-01 Retailers stop sale 12-31-01 Stop formulation 12-1-00 unless label has stop use date of 12-31-02 Stop production 12-31-04 Stop use 12-31-05

Non-Residential Uses		
Site	Mitigation Measures	Effective Dates
Indoor areas where children could be exposed (such as schools)	Uses will be canceled	Stop formulation 12-1-00 Formulators stop sale 2-1-01 Retailers stop sale 12-31-01
Outdoor areas where children could be exposed (such as parks)	Uses will be canceled	Stop formulation 12-1-00 Formulators stop sale 2-1-01 Retailers stop sale 12-31-01

Non-Agricultural Uses that Will Remain		
Site	Mitigation Measures	Effective Dates
Residential use of containerized baits	Already in child resistant packaging	(Use allowed to continue)
Indoor areas where children will not be exposed, including only ship holds, railroad boxcars, industrial plants, manufacturing plants, or food processing plants		New end-use product labels must reflect only these uses as of 12-1-00
Outdoor areas where children will not be exposed, including only: <ul style="list-style-type: none"> ' Golf courses ' Road medians ' Industrial plant sites ' Non-structural wood treatments including fenceposts, utility poles, railroad ties, landscape timbers, logs, pallets, wooden containers, poles, posts, and processed wood products Public health uses: <ul style="list-style-type: none"> ' Fire ant mounds (drench and granular treatment) ' Mosquito control 	Reduce application rate from 4 lbs/acre to 1 lb/acre Reduce maximum application rate to 1 lb ai/acre Reduce maximum application rate to 1 lb ai/acre (Continue at current rate) For professional use only For professional use only	New end-use product labels must reflect only these uses as of 12-1-00

For Additional Information

For additional materials on the chlorpyrifos decision, or for information on other aspects of the Agency's pesticide regulatory program, contact EPA's Office of Pesticide Programs at (703) 305-5017, or visit our web site, www.epa.gov/pesticides.

For information on pesticides and their toxicity, contact the National Pesticide Telecommunications Network at 1-800-858-7378.