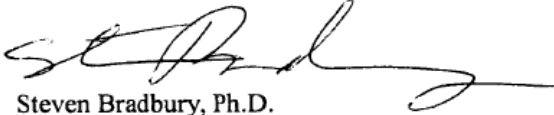


If you have questions on the propargite RED or any of the revisions listed above, please contact the Chemical Review Manager, Joy Schnackenbeck at (703) 308-8072.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Bradbury', with a long horizontal flourish extending to the right.

Steven Bradbury, Ph.D.
Director
Special Review and Reregistration Division

cc: George LaRocca
Kevin Sweeney
Eric Olson
Joy Schnackenbeck

Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
Manufacturing Use Products		
<p>One of these statements may be added to a label to allow reformulation of the product for a specific use or all additional uses supported by a formulator or user group</p>	<p>“Only for formulation into an miticide for the following use(s): alfalfa grown for seed; almond; apples (non-bearing); apricots (non-bearing); avocado (non-bearing); bean, dry (including dry lima beans); berries (non-bearing); boysenberry (non-bearing); carrot (grown for seed); cherry (foliar after harvest); Christmas tree, ornamental and/or shade, ornamental herbaceous plants; clover grown for seed; corn (field, pop, sweet); cotton; currant (non-bearing); dates (non-bearing); figs (non-bearing); grapefruit; grapes; hazel nut (non-bearing); hops; jojoba; lemon; lime (non-bearing); macadamia nut (non-bearing); mint (field grown); nectarine; orange; peaches (non-bearing); pears (non-bearing); peanuts; pecan (non-bearing); persimmon (non-bearing); pistachio (non-bearing); plums (non-bearing); potato; prunes (non-bearing); quince (non-bearing); raspberry (non-bearing); roses(field grown); strawberries (non-bearing); sorghum; sugar beets (grown for seed); tangerines (non-bearing); and walnuts.”</p> <p>“This product may be used to formulate products for specific use(s) not listed on the MP label if the formulator, user group, or grower has complied with U.S. EPA submission requirements regarding support of such use(s).”</p> <p>“This product may be used to formulate products for any additional use(s) not listed on the MP label if the formulator, user group, or grower has complied with U.S. EPA submission requirements regarding support of such use(s).”</p>	<p>Directions for Use</p> <p>Directions for Use</p>
<p>Environmental Hazards Statements Required by the RED and Agency Label Policies</p>	<p>This pesticide is toxic to fish. Do not discharge effluent into lakes, streams, ponds, estuaries, oceans, or public waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.</p>	<p>Directions for Use</p>

Summary of Required Labeling Changes for Propargite		
Description	Required Labeling	Placement on Label
End Use Products Intended for Occupational Use (WPS)		
Restricted Use Pesticide Requirement (all formulations)	Restricted Use Pesticide “Due to acute skin and eye effect. For retail sale to and use only by Certified Applicators, or persons under their supervision, and only for those uses covered by the Certified Applicator’s certification.”	
PPE Requirements Established by the RED ¹ for liquid products	<p>“Personal Protective Equipment (PPE)</p> <p>Some materials that are chemical-resistant to this product are” (<i>registrant inserts correct chemical-resistant material</i>). “If you want more options, follow the instructions for category [<i>registrant inserts A,B,C,D,E,F,G,or H</i>] on an EPA chemical-resistance category selection chart.”</p> <p>“Mixers, loaders, applicators and other handlers must wear:</p> <p>Long-sleeved shirt and long pants Shoes plus socks Chemical-resistant gloves (except for flaggers and applicators using closed cabs) Chemical-resistant apron for mixers and loaders and persons exposed to the concentrate</p> <p>See engineering controls for additional requirements”</p>	Immediately following/below Precautionary Statements: Hazards to Humans and Domestic Animals
PPE Requirements Established by the RED ¹ for Wettable Powder product formulations must be packaged in Water Soluble Packaging (WSP) to be eligible for reregistration.	<p>“Personal Protective Equipment (PPE)</p> <p>Some materials that are chemical-resistant to this product are” (<i>registrant inserts correct chemical-resistant material</i>). “If you want more options, follow the instructions for category [<i>registrant inserts A,B,C,D,E,F,G,or H</i>] on an EPA chemical-resistance category selection chart.”</p> <p>Mixers, loaders, applicators and other handlers must wear:</p> <p>Long-sleeved shirt and long pants Shoes plus socks Chemical-resistant gloves (except for flaggers and applicators using closed cabs) Chemical-resistant apron for mixers and loaders.</p> <p>See engineering controls for additional requirements”</p>	Immediately following/below Precautionary Statements: Hazards to Humans and Domestic Animals

Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
User Safety Requirements	“Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.”	Precautionary Statements: Hazards to Humans and Domestic Animals immediately following the PPE requirements
Engineering Controls Established by the RED ¹ for liquid products	<p>Engineering Controls</p> <p>“Mixers and loaders supporting aerial applications to corn and cotton must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], and must:</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for mixers/loaders, -- wear protective eyewear if the system operates under pressure, and -- be provided and have immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown: coveralls, and chemical-resistant footwear” <p>“Applicators using airblast spray equipment must:</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for mixers and loaders, -- be provided and must have immediately available when they must enter the treated area: coveralls, chemical resistant gloves, chemical-resistant footwear, and chemical-resistant headgear, if overhead exposure” <p>“When applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.”</p>	Precautionary Statements: Hazards to Humans and Domestic Animals (Immediately following PPE and User Safety Requirements.)

Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
<p>Engineering Controls Established by the RED¹ for Wettable Powders in Water Soluble Packaging. All WP product must be packaged in Water Soluble Packaging (WSP) to be eligible for reregistration.</p>	<p>“Engineering Controls</p> <p>Water-soluble packets when used correctly qualify as a closed mixing/loading system under the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water-soluble packets must :</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for mixers/ loaders, and -- be provided and must have immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown: coveralls, chemical-resistant footwear, and a NIOSH approved respirator with an organic vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or an organic vapor cartridge or canister with any N, R, P or HE prefilter, and Chemical-resistant headgear, if overhead exposure.” <p>“Applicators using airblast spray equipment must:</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for applicators, -- be provided and must have immediately available for use in an emergency when they must enter the treated area: coveralls, chemical resistant gloves, chemical-resistant footwear, and chemical-resistant headgear, if overhead exposure, -- take off any PPE that was worn in the treated area before reentering the cab if the applicators are operating a closed cab, and -- store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab or other enclosed.” <p>“When other applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.”</p> 	<p>Precautionary Statements: Hazards to Humans and Domestic Animals (Immediately following PPE and User Safety Requirements.)</p>

Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
User Safety Recommendations	<p>“User Safety Recommendations</p> <p>Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.</p> <p>Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.</p> <p>Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.”</p>	<p>Precautionary Statements under: Hazards to Humans and Domestic Animals immediately following Engineering Controls</p> <p>(Must be placed in a box.)</p>
Environmental Hazards	<p>“This product is toxic to aquatic invertebrates and wildlife and may cause reproductive effects. Do not apply directly to water, or areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply by ground application equipment within 50 feet of surface waters or by aerial application equipment within 75 feet of surface water. See Directions for Use for additional restrictions. Do not contaminate water when disposing of equipment wash water.”</p>	<p>Precautionary Statements immediately following the User Safety Recommendations</p>
Restricted-Entry Interval	<p>In the Agricultural Use Requirements box, place the following statements:</p> <p align="center">“Do not enter or allow workers to enter during the restricted-entry interval (REI), except as provided for by the WPS. The REI and Exceptions are listed in the Directions for Use associated with the crop.”</p> <p>“Notify workers of the exception (including when entry is permitted for each of the tasks named in the exception).”</p>	<p>Directions for Use, Agricultural Use Requirements Box and Application Instructions for Appropriate Crop</p>

Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
<p>Restricted-Entry Interval (continued)</p>	<p>In the Directions for Use under Application Instructions for each crop, specify the following REIs:</p> <p>Carrots, cherries, dates, jojoba, peanuts, persimmon, potatoes, quince, sorghum, and sugar beets. enter crop or crop group): The REI is 48 hours.</p> <p>Nectarine: The REI is five days.</p> <p>Cotton: The REI is six days.</p> <p>Alfalfa, beans (dry), clover: The REI is nine days.</p> <p>Mint: The REI is seven days.</p> <p>Berry Crops: The REI is ten days,</p> <p>Avocado, The REI is eleven days,</p> <p>Corn (field, pop and sweet): The REI is thirteen days,</p> <p>Christmas Tree, ornamental and shade trees, ornamental herbaceous plants: The REI is fourteen days.</p>	

Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
	<p>Lime: The REI is sixteen days,</p> <p>Hops: The REI is twenty-one days,</p> <p>Almonds, hazel nut, macadamia, pecan, pistachio: The REI is twenty-two days,</p> <p>Grapes (except table): The REI is sixteen days,</p> <p>Table Grapes: The REI is twenty-seven days,</p> <p>Walnuts: The REI is thirty days. <u>Exception:</u> In addition to the early entry exceptions allowed by the Worker Protection Standard, you may enter or allow workers to enter treated areas to perform tree shaking tasks twenty one days following application as long as the worker wears long pants, long sleeved shirt and shoes plus socks.”</p> <p>Citrus: The REI is twenty days.</p>	
<p>Early Re-entry Personal Protective Equipment established by the RED.</p>	<p>“ PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:</p> <ul style="list-style-type: none"> -- coveralls over long-sleeved shirt and long pants, -- chemical-resistant gloves made of any waterproof material, -- chemical-resistant footwear plus socks, and -- protective eyewear.” <p>“Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.”</p>	<p>Directions for Use, Agricultural Use Requirements Box</p>
<p>Notification Statement</p>	<p>“Notify workers of the application by warning them orally and by posting warning signs at entrances to treated area.”</p>	<p>Directions for Use, Agricultural Use Requirements Box</p>
<p>General Application Restrictions</p>	<p>“Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.”</p>	<p>Place in the Direction for Use directly above the Agricultural Use Box.</p>

Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label																					
Other Application Restrictions (continued)	<p>The following risk mitigation measures must be reflected in the directions for use:</p> <p>New Spray Intervals Required for Propargite:</p> <table border="1" data-bbox="527 467 1604 1068"> <thead> <tr> <th data-bbox="527 467 1005 548">Crop</th> <th data-bbox="1005 467 1310 548">Minimum Spray Interval (Days)</th> <th data-bbox="1310 467 1604 548">Total Number of Sprays per Year</th> </tr> </thead> <tbody> <tr> <td data-bbox="527 548 1005 703">Almonds; beans (dry); cotton; grapes; hops; nectarines; potatoes (excluding Washington); walnuts; non-bearing crops</td> <td align="center" data-bbox="1005 548 1310 703">21</td> <td align="center" data-bbox="1310 548 1604 703">2</td> </tr> <tr> <td data-bbox="527 703 1005 743">Jojoba</td> <td align="center" data-bbox="1005 703 1310 743">21</td> <td align="center" data-bbox="1310 703 1604 743">1</td> </tr> <tr> <td data-bbox="527 743 1005 784">Citrus (orange, grapefruit, lemons)</td> <td align="center" data-bbox="1005 743 1310 784">28</td> <td align="center" data-bbox="1310 743 1604 784">2</td> </tr> <tr> <td data-bbox="527 784 1005 954">Ornamentals, Christmas Trees and Conifers</td> <td align="center" data-bbox="1005 784 1310 954">28 (west of Rocky Mts.) 7 (east of Rocky Mts.)</td> <td align="center" data-bbox="1310 784 1604 954">3</td> </tr> <tr> <td data-bbox="527 954 1005 995">Roses, other ornamentals</td> <td align="center" data-bbox="1005 954 1310 995">14</td> <td align="center" data-bbox="1310 954 1604 995">3</td> </tr> <tr> <td data-bbox="527 995 1005 1068">Potato (Washington); peanuts; mint</td> <td align="center" data-bbox="1005 995 1310 1068">14</td> <td align="center" data-bbox="1310 995 1604 1068">2</td> </tr> </tbody> </table>	Crop	Minimum Spray Interval (Days)	Total Number of Sprays per Year	Almonds; beans (dry); cotton; grapes; hops; nectarines; potatoes (excluding Washington); walnuts; non-bearing crops	21	2	Jojoba	21	1	Citrus (orange, grapefruit, lemons)	28	2	Ornamentals, Christmas Trees and Conifers	28 (west of Rocky Mts.) 7 (east of Rocky Mts.)	3	Roses, other ornamentals	14	3	Potato (Washington); peanuts; mint	14	2	Directions for Use
Crop	Minimum Spray Interval (Days)	Total Number of Sprays per Year																					
Almonds; beans (dry); cotton; grapes; hops; nectarines; potatoes (excluding Washington); walnuts; non-bearing crops	21	2																					
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Citrus (orange, grapefruit, lemons)	28	2																					
Ornamentals, Christmas Trees and Conifers	28 (west of Rocky Mts.) 7 (east of Rocky Mts.)	3																					
Roses, other ornamentals	14	3																					
Potato (Washington); peanuts; mint	14	2																					
Spray Drift Restrictions	<p>The following spray drift statement is required.</p> <p>“WHEN SPRAYING IN THE VICINTY OF AQUATIC AREAS</p> <ul style="list-style-type: none"> • Do not apply by ground within 50 feet or by air within 75 feet of aquatic habitats such as lakes, reservoirs, rivers, permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds. • Risk of exposure to sensitive aquatic areas can be reduced by making applications when the wind direction is away from the aquatic area. • The above buffered bodies of water excludes irrigation canals and wasteways as well as man-made irrigation conveyance structures and impoundments. 																						

Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
Spray Drift Restrictions (continued)	<p>WIND DIRECTION AND WIND SPEED</p> <ul style="list-style-type: none"> • Only apply this product if the wind direction favors on target deposition. • Do not apply when the wind velocity exceeds 15 mph. <p>TEMPERATURE INVERSION</p> <ul style="list-style-type: none"> • Do not make aerial or ground applications into temperature inversions. • Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface. <p>DROPLET SIZE</p> <ul style="list-style-type: none"> • Apply the coarsest droplet size spectrum that provides sufficient coverage and mite control. <p>ADDITIONAL REQUIREMENTS FOR GROUND APPLICATIONS</p> <ul style="list-style-type: none"> • For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. • For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy. <p>ADDITIONAL REQUIREMENTS FOR AERIAL APPLICATIONS</p> <ul style="list-style-type: none"> • The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter. • Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. • When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.” 	

Summary of Required Labeling Changes for Propargite		
Description	Required Labeling	Placement on Label
Runoff Restrictions	<p>“Under some conditions, propargite may have a high potential for runoff into surface water for several days after application. Do not apply in the following areas:</p> <ul style="list-style-type: none"> -- frequently flooded areas (excluding artificially flooded areas). -- areas where intense or sustained rainfall is forecasted to occur within 48 hours. <p>Use best management practices for minimizing surface runoff in the following areas:</p> <ul style="list-style-type: none"> -- poorly draining or wet soils with readily visible slopes toward adjacent surface water. -- areas with in-field canals or ditches that drain to surface water. -- areas not separated from adjacent surface waters with vegetated filter.” 	
Plant Back Interval	<p>“Do not plant any root crop in rotation within 6 months after last application of propargite to labeled crops. Do not plant other crops in rotation within 2 months after last application of propargite to labeled crops.”</p>	

¹PPE that is established on the basis of Acute Toxicity of the end-use product must be compared to the active ingredient PPE in this document. The more protective PPE must be placed in the product labeling. For guidance on which PPE is considered more protective, see PR Notice 93-7.

Instructions in the Labeling Required section appearing in quotations represent the exact language that must appear on the label.

Instructions in the Labeling Required section not in quotes represent actions that the registrant must take to amend their labels or product registrations.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

CERTIFIED MAIL

9/19/07

Dear Reader:

The Reregistration Eligibility Decision (RED) document for propargite was signed on September 28, 2001. In accordance with the Environmental Protection Agency's (Agency) public participation process, a public comment period for the RED (and the supporting benefit assessments) was conducted. This comment period opened April 18, 2002 and closed June 17, 2002. The risk assessments, benefit assessments, and public comments can be found on the FDMS docket system, available at <http://www.regulations.gov> (docket # OPP-2002-0009). As a result of the Agency's review of the public comments, the propargite RED was revised, and these changes were incorporated into a December 15, 2005 version.

Upon further review, the Agency has decided to revise the December 15, 2005 propargite RED. This letter outlines the Agency's rationale for changes and constitutes the revised propargite RED. An updated label table, which includes the mitigation revisions discussed in this letter, is enclosed.

- Based on estimated worker exposures to propargite during airblast spray applications at the maximum use rate (4.5 lbs a.i./A), the RED required that enclosed cabs be used for the application method. The Agency estimated the intermediate dermal Margin of Exposure (MOE) for this exposure scenario to be 90 (target MOE is 100). Using the Agency's exposure assumptions, an MOE of 100 would be achieved if the maximum use rate was dropped to 4.05 lbs a.i./A and workers wear baseline personal protective equipment (PPE) (long-sleeved shirt, long pants, coveralls, shoes and socks) plus chemical resistant head gear. Therefore the Agency has decided to lower the maximum use rate of propargite to 4.05 lbs a.i./A for airblast applications and replace the enclosed cab requirement with the PPE requirements listed above.
- The spray drift language in the December 15, 2005 version is no longer consistent with Agency policy. Since the publication of the RED, the Agency has adopted a

If you have questions on the propargite RED or any of the revisions listed above, please contact the Chemical Review Manager, Joy Schnackenbeck at (703) 308-8072.

Sincerely,

Steven Bradbury, Ph.D.
Director
Special Review and Reregistration Division

Enclosure

Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
Manufacturing Use Products		
<p>One of these statements may be added to a label to allow reformulation of the product for a specific use or all additional uses supported by a formulator or user group</p>	<p>“Only for formulation into an miticide for the following use(s): alfalfa grown for seed; almond; apples (non-bearing); apricots (non-bearing); avocado (non-bearing); bean, dry (including dry lima beans); berries (non-bearing); boysenberry (non-bearing); carrot (grown for seed); cherry (foliar after harvest); Christmas tree, ornamental and/or shade, ornamental herbaceous plants; clover grown for seed; corn (field, pop, sweet); cotton; currant (non-bearing); dates (non-bearing); figs (non-bearing); grapefruit; grapes; hazel nut (non-bearing); hops; jojoba; lemon; lime (non-bearing); macadamia nut (non-bearing); mint (field grown); nectarine; orange; peaches (non-bearing); pears (non-bearing); peanuts; pecan (non-bearing); persimmon (non-bearing); pistachio (non-bearing); plums (non-bearing); potato; prunes (non-bearing); quince (non-bearing); raspberry (non-bearing); roses(field grown); strawberries (non-bearing); sorghum; sugar beets (grown for seed); tangerines (non-bearing); and walnuts.”</p>	<p>Directions for Use</p>
	<p>“This product may be used to formulate products for specific use(s) not listed on the MP label if the formulator, user group, or grower has complied with U.S. EPA submission requirements regarding support of such use(s).”</p> <p>“This product may be used to formulate products for any additional use(s) not listed on the MP label if the formulator, user group, or grower has complied with U.S. EPA submission requirements regarding support of such use(s).”</p>	<p>Directions for Use</p>
<p>Environmental Hazards Statements Required by the RED and Agency Label Policies</p>	<p>This pesticide is toxic to fish. Do not discharge effluent into lakes, streams, ponds, estuaries, oceans, or public waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.</p>	<p>Directions for Use</p>

Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
End Use Products Intended for Occupational Use (WPS)		
Restricted Use Pesticide Requirement (all formulations)	Restricted Use Pesticide “Due to acute skin and eye effect. For retail sale to and use only by Certified Applicators, or persons under their supervision, and only for those uses covered by the Certified Applicator’s certification.”	
PPE Requirements Established by the RED ¹ for liquid products	<p>“Personal Protective Equipment (PPE)</p> <p>Some materials that are chemical-resistant to this product are” (<i>registrant inserts correct chemical-resistant material</i>). “If you want more options, follow the instructions for category [<i>registrant inserts A,B,C,D,E,F,G,or H</i>] on an EPA chemical-resistance category selection chart.”</p> <p>“Mixers, loaders, applicators and other handlers must wear:</p> <p>Long-sleeved shirt and long pants Shoes plus socks Chemical-resistant gloves (except for flaggers and applicators using closed cabs) Chemical-resistant apron for mixers and loaders and persons exposed to the concentrate</p> <p>See engineering controls for additional requirements”</p>	Immediately following/below Precautionary Statements: Hazards to Humans and Domestic Animals
PPE Requirements Established by the RED ¹ for Wettable Powder product formulations must be packaged in Water Soluble Packaging (WSP) to be eligible for reregistration.	<p>“Personal Protective Equipment (PPE)</p> <p>Some materials that are chemical-resistant to this product are” (<i>registrant inserts correct chemical-resistant material</i>). “If you want more options, follow the instructions for category [<i>registrant inserts A,B,C,D,E,F,G,or H</i>] on an EPA chemical-resistance category selection chart.”</p> <p>Mixers, loaders, applicators and other handlers must wear:</p> <p>Long-sleeved shirt and long pants Shoes plus socks Chemical-resistant gloves (except for flaggers and applicators using closed cabs) Chemical-resistant apron for mixers and loaders.</p> <p>See engineering controls for additional requirements”</p>	Immediately following/below Precautionary Statements: Hazards to Humans and Domestic Animals

Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
User Safety Requirements	<p>“Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.”</p>	<p>Precautionary Statements: Hazards to Humans and Domestic Animals immediately following the PPE requirements</p>
<p>Engineering Controls Established by the RED¹ for liquid products</p>	<p>Engineering Controls</p> <p>“Mixers and loaders supporting aerial applications to corn and cotton must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], and must:</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for mixers/loaders, -- wear protective eyewear if the system operates under pressure, and -- be provided and have immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown: coveralls, and chemical-resistant footwear” <p>“Applicators using airblast spray equipment must:</p> <ul style="list-style-type: none"> wear the personal protective equipment required above for mixers and loaders, -- be provided and must have immediately available when they must enter the treated area: coveralls, chemical resistant gloves, chemical-resistant footwear, and chemical-resistant headgear, if overhead exposure” -- <p>“When applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.”</p>	<p>Precautionary Statements: Hazards to Humans and Domestic Animals (Immediately following PPE and User Safety Requirements.)</p>

Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
<p>Engineering Controls Established by the RED¹ for Wettable Powders in Water Soluble Packaging. All WP product must be packaged in Water Soluble Packaging (WSP) to be eligible for reregistration.</p>	<p>“Engineering Controls</p> <p>Water-soluble packets when used correctly qualify as a closed mixing/loading system under the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water-soluble packets must :</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for mixers/ loaders, and -- be provided and must have immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown: coveralls, chemical-resistant footwear, and a NIOSH approved respirator with an organic vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or an organic vapor cartridge or canister with any N, R, P or HE prefilter, and Chemical-resistant headgear, if overhead exposure.” <p>“Applicators using airblast spray equipment must:</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for applicators, -- be provided and must have immediately available for use in an emergency when they must enter the treated area: coveralls, chemical resistant gloves, chemical-resistant footwear, and chemical-resistant headgear, if overhead exposure, -- take off any PPE that was worn in the treated area before reentering the cab if the applicators are operating a closed cab, and -- store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab or other enclosed.” <p>“When other applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.”</p> 	<p>Precautionary Statements: Hazards to Humans and Domestic Animals (Immediately following PPE and User Safety Requirements.)</p>

Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
User Safety Recommendations	<p>“User Safety Recommendations</p> <p>Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.</p> <p>Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.</p> <p>Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.”</p>	<p>Precautionary Statements under: Hazards to Humans and Domestic Animals immediately following Engineering Controls</p> <p>(Must be placed in a box.)</p>
Environmental Hazards	<p>“This product is toxic to aquatic invertebrates and wildlife and may cause reproductive effects. Do not apply directly to water, or areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply by ground application equipment within 50 feet of surface waters or by aerial application equipment within 75 feet of surface water. See Directions for Use for additional restrictions. Do not contaminate water when disposing of equipment wash water.”</p>	<p>Precautionary Statements immediately following the User Safety Recommendations</p>
Restricted-Entry Interval	<p>In the Agricultural Use Requirements box, place the following statements:</p> <p align="center">“Do not enter or allow workers to enter during the restricted-entry interval (REI), except as provided for by the WPS. The REI and Exceptions are listed in the Directions for Use associated with the crop.”</p> <p>“Notify workers of the exception (including when entry is permitted for each of the tasks named in the exception).”</p>	<p>Directions for Use, Agricultural Use Requirements Box and Application Instructions for Appropriate Crop</p>

Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
	<p>In the Directions for Use under Application Instructions for each crop, specify the following REIs:</p> <p>Carrots, cherries, dates, jojoba, peanuts, persimmon, potatoes, quince, sorghum, and sugar beets. enter crop or crop group): The REI is 48 hours.</p> <p>Nectarine: The REI is five days.</p> <p>Cotton: The REI is six days.</p> <p>Alfalfa, beans (dry), clover: The REI is nine days.</p> <p>Mint: The REI is seven days.</p> <p>Berry Crops: The REI is ten days,</p> <p>Avocado, The REI is eleven days,</p> <p>Corn (field, pop and sweet): The REI is thirteen days,</p> <p>Christmas Tree, ornamental and shade trees, ornamental herbaceous plants: The REI is fourteen days.</p>	

Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
	<p>Lime: The REI is sixteen days,</p> <p>Hops: The REI is twenty-one days,</p> <p>Almonds, hazel nut, macadamia, pecan, pistachio: The REI is twenty-two days,</p> <p>Grapes (except table): The REI is sixteen days,</p> <p>Table Grapes: The REI is twenty-seven days,</p> <p>Walnuts: The REI is thirty days. <u>Exception</u>: In addition to the early entry exceptions allowed by the Worker Protection Standard, you may enter or allow workers to enter treated areas to perform tree shaking tasks twenty one days following application as long as the worker wears long pants, long sleeved shirt and shoes plus socks.”</p> <p>Citrus: The REI is twenty days.</p>	
<p>Early Re-entry Personal Protective Equipment established by the RED.</p>	<p>“ PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:</p> <ul style="list-style-type: none"> -- coveralls over long-sleeved shirt and long pants, -- chemical-resistant gloves made of any waterproof material, -- chemical-resistant footwear plus socks, and -- protective eyewear.” <p>“Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.”</p>	<p>Directions for Use, Agricultural Use Requirements Box</p>
<p>Notification Statement</p>	<p>“Notify workers of the application by warning them orally and by posting warning signs at entrances to treated area.”</p>	<p>Directions for Use, Agricultural Use Requirements Box</p>
<p>General Application Restrictions</p>	<p>“Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.”</p>	<p>Place in the Direction for Use directly above the Agricultural Use Box.</p>

Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label																										
Other Application Restrictions	<p>The following risk mitigation measures must be reflected in the directions for use:</p> <p>“The maximum application rate for spray blast application is 4.05 lbs. a.i./Acre”</p> <p>New Annual Application Rates Restrictions:</p> <p style="text-align: center;">Annual Application Rate</p> <hr/> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Crop</td> <td style="width: 20%;"></td> </tr> <tr> <td>Beans (6 lbs/gal EC)</td> <td style="text-align: right;">4.5</td> </tr> <tr> <td>Beans (6.55 lbs/gal EC)</td> <td style="text-align: right;">3.7</td> </tr> <tr> <td>Citrus (Liquid EC)</td> <td style="text-align: right;">4.1</td> </tr> <tr> <td>Cotton</td> <td style="text-align: right;">3.3</td> </tr> <tr> <td>Field corn/Popcorn</td> <td style="text-align: right;">1.5</td> </tr> <tr> <td>Jajoba</td> <td style="text-align: right;">1.6</td> </tr> <tr> <td>Mint</td> <td style="text-align: right;">4.1</td> </tr> <tr> <td>Oranges/Grapefruit/Lemons (WP)</td> <td style="text-align: right;">5.8</td> </tr> <tr> <td>Potatoes (6 lb/gal EC)</td> <td style="text-align: right;">4.1</td> </tr> <tr> <td>Potatoes (6.55 lb/gal EC)</td> <td style="text-align: right;">3.7</td> </tr> <tr> <td>Walnuts (6 lbs/gal EC)</td> <td style="text-align: right;">4.1</td> </tr> <tr> <td>Walnuts (3% WP(WSP))</td> <td style="text-align: right;">6.4</td> </tr> </table>	Crop		Beans (6 lbs/gal EC)	4.5	Beans (6.55 lbs/gal EC)	3.7	Citrus (Liquid EC)	4.1	Cotton	3.3	Field corn/Popcorn	1.5	Jajoba	1.6	Mint	4.1	Oranges/Grapefruit/Lemons (WP)	5.8	Potatoes (6 lb/gal EC)	4.1	Potatoes (6.55 lb/gal EC)	3.7	Walnuts (6 lbs/gal EC)	4.1	Walnuts (3% WP(WSP))	6.4	Directions for Use
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Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label																					
Other Application Restrictions (continued)	<p>The following risk mitigation measures must be reflected in the directions for use:</p> <p>New Spray Intervals Required for Propargite:</p> <table border="1" data-bbox="527 467 1646 1036"> <thead> <tr> <th data-bbox="527 467 1024 548">Crop</th> <th data-bbox="1024 467 1335 548">Minimum Spray Interval (Days)</th> <th data-bbox="1335 467 1646 548">Total Number of Sprays per Year</th> </tr> </thead> <tbody> <tr> <td data-bbox="527 548 1024 703">Almonds; beans (dry); cotton; grapes; hops; nectarines; potatoes (excluding Washington); walnuts; non-bearing crops</td> <td data-bbox="1024 548 1335 703">21</td> <td data-bbox="1335 548 1646 703">2</td> </tr> <tr> <td data-bbox="527 703 1024 743">Jojoba</td> <td data-bbox="1024 703 1335 743">21</td> <td data-bbox="1335 703 1646 743">1</td> </tr> <tr> <td data-bbox="527 743 1024 784">Citrus (orange, grapefruit, lemons)</td> <td data-bbox="1024 743 1335 784">28</td> <td data-bbox="1335 743 1646 784">2</td> </tr> <tr> <td data-bbox="527 784 1024 946">Ornamentals, Christmas Trees and Conifers</td> <td data-bbox="1024 784 1335 946">28 (west of Rocky Mts.) 7 (east of Rocky Mts.)</td> <td data-bbox="1335 784 1646 946">3</td> </tr> <tr> <td data-bbox="527 946 1024 987">Roses, other ornamentals</td> <td data-bbox="1024 946 1335 987">14</td> <td data-bbox="1335 946 1646 987">3</td> </tr> <tr> <td data-bbox="527 987 1024 1036">Potato (Washington); peanuts; mint</td> <td data-bbox="1024 987 1335 1036">14</td> <td data-bbox="1335 987 1646 1036">2</td> </tr> </tbody> </table>	Crop	Minimum Spray Interval (Days)	Total Number of Sprays per Year	Almonds; beans (dry); cotton; grapes; hops; nectarines; potatoes (excluding Washington); walnuts; non-bearing crops	21	2	Jojoba	21	1	Citrus (orange, grapefruit, lemons)	28	2	Ornamentals, Christmas Trees and Conifers	28 (west of Rocky Mts.) 7 (east of Rocky Mts.)	3	Roses, other ornamentals	14	3	Potato (Washington); peanuts; mint	14	2	Directions for Use
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Roses, other ornamentals	14	3																					
Potato (Washington); peanuts; mint	14	2																					
Spray Drift Restrictions	<p>The following spray drift statement is required.</p> <p align="center">“WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS</p> <ul style="list-style-type: none"> • Do not apply by ground within 50 feet or by air within 75 feet of aquatic habitats such as lakes, reservoirs, rivers, permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds. • Risk of exposure to sensitive aquatic areas can be reduced by making applications when the wind direction is away from the aquatic area. • The above buffered bodies of water excludes irrigation canals and wasteways as well as man-made irrigation conveyance structures and impoundments. 																						

Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
	<p>WIND DIRECTION AND WIND SPEED</p> <ul style="list-style-type: none"> • Only apply this product if the wind direction favors on target deposition. • Do not apply when the wind velocity exceeds 15 mph. <p>TEMPERATURE INVERSION</p> <ul style="list-style-type: none"> • Do not make aerial or ground applications into temperature inversions. • Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface. <p>DROPLET SIZE</p> <ul style="list-style-type: none"> • Apply the coarsest droplet size spectrum that provides sufficient coverage and mite control. <p>ADDITIONAL REQUIREMENTS FOR GROUND APPLICATIONS</p> <ul style="list-style-type: none"> • For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. • For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy. <p>ADDITIONAL REQUIREMENTS FOR AERIAL APPLICATIONS</p> <ul style="list-style-type: none"> • The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter. • Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. • When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.” 	

Table 15 Summary of Required Labeling Changes for Propargite

Description	Required Labeling	Placement on Label
Runoff Restrictions	<p>“Under some conditions, propargite may have a high potential for runoff into surface water for several days after application. Do not apply in the following areas:</p> <ul style="list-style-type: none"> -- frequently flooded areas (excluding artificially flooded areas). -- areas where intense or sustained rainfall is forecasted to occur within 48 hours. <p>Use best management practices for minimizing surface runoff in the following areas:</p> <ul style="list-style-type: none"> -- poorly draining or wet soils with readily visible slopes toward adjacent surface water. -- areas with in-field canals or ditches that drain to surface water. -- areas not separated from adjacent surface waters with vegetated filter.” 	

¹PPE that is established on the basis of Acute Toxicity of the end-use product must be compared to the active ingredient PPE in this document. The more protective PPE must be placed in the product labeling. For guidance on which PPE is considered more protective, see PR Notice 93-7.

Instructions in the Labeling Required section appearing in quotations represent the exact language that must appear on the label.

Instructions in the Labeling Required section not in quotes represent actions that the registrant must take to amend their labels or product registrations.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

December 15, 2005

Dear Reader:

The Reregistration Eligibility Decision (RED) document for was signed on September 28, 2001. A post-signature comment period opened April 18, 2002 and closed June 17, 2002. The risk assessments, benefit assessments, and public comments can be found on the FDMS docket system, available at <http://www.regulations.gov> (docket # OPP-2002-0009). The Environmental Protection Agency has reviewed and responded to the public comments. These responses are also available for viewing in the FDMS docket. As a result of its review of the public comments, the Agency revised the Propargite RED, where appropriate. The following changes were made to the September 28, 2001 version of the RED; these changes are incorporated in this December 15, 2005 version.

- (1) Walnut: 21-day restricted-entry interval (REI) exemption granted for tree shaking;
- (2) Citrus (bearing): REI for all activities changed to 20 days;
- (3) Mint: REIs for all activities reduced to 7 days;
- (4) Potato: maximum per season use rate increased from 3.7 to 4.1 pounds active ingredient per acre ("lbs. a.i./A") acre per season;
- (5) Potato: spray interval reduced from 21 days to 14 days for Washington State;
- (6) Mint: spray interval reduced from 21 days to 14 days.

In addition to the substantive changes listed above, the Agency has also reformatted Appendix B, Appendix D and Appendix I for clarity, and has made technical changes to Table 15 to conform to current labeling language.

The revised document attached to this letter represents the EPA's reregistration decision for propargite. If you have questions on this RED or any of the revisions listed above, please contact the Chemical Review Manager, Dayton Eckerson, at (703) 308-8038. For questions about product reregistration, please contact Bonnie Adler (703) 308-8523.

Sincerely,

Debra Edwards, Ph.D.
Director, Special Review and Reregistration Division

Attachment



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460**

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

CERTIFIED MAIL

September 28, 2001

Dear Registrant:

This is to inform you that the Environmental Protection Agency (hereafter referred to as EPA or the Agency) has completed its review of the available data and public comments received related to the preliminary risk assessment for the miticide propargite. The Agency has revised the human health and environmental effects risk assessments based on the comments received during the public comment period and additional data received from the registrant. Based on the EPA's revised risk assessments for propargite, EPA has identified risk mitigation measures that the Agency believes are necessary to address the human health and environmental risks associated with the current use of propargite. EPA is now publishing its reregistration eligibility, risk management, and tolerance reassessment decisions for the current uses of propargite, and its associated human health and environmental risks. The Agency's decision on the individual chemical propargite can be found in the attached document entitled, "Reregistration Eligibility Decision for Propargite" which was approved on September 28, 2001.

A Notice of Availability for the Reregistration Eligibility Decision for Propargite is being published in the *Federal Register*. To obtain copies of the RED document, please contact the Pesticide Docket, Public Response and Program Resources Branch, Field Operations Division (7506C), Office of Pesticide Programs (OPP), USEPA, Washington, DC 20460, telephone (703) 305-5805. Electronic copies of the RED and all supporting documents are available on the Internet. See <http://www.epa.gov/pesticides/reregistration/status.htm>

As part of the Agency's effort to involve the public in the implementation of the Food Quality Protection Act of 1996 (FQPA), the Agency is undertaking a special effort to maintain open public dockets and to engage the public in the reregistration and tolerance reassessment processes. In cooperation with the U.S. Department of Agriculture, the Agency held a teleconference on July 19, 2000, during which the results of the human health and environmental effects risk assessments were presented to interested stakeholders. Information discussed during the call, such as propargite usage and occupational practices, are reflected in this RED. Also, a close-out conference call was conducted on September 25, 2001 with many of the same participants from the July 19 conference call, to discuss the risk management decisions and resultant changes to the propargite labels.

**Reregistration Eligibility Decision
(RED)
for
Propargite
Case No. 0243**

Effective: September 28, 2001
Amended: December 15, 2005
Amended: September 19, 2007
Amended: June 25, 2008

TABLE OF CONTENTS

Executive Summary	2
I. Introduction	7
II. Chemical Overview	8
A. Regulatory History	8
B. Chemical Identification	9
C. Use Profile	10
D. Estimated Usage of Pesticide	10
III. Summary of Propargite Risk Assessment	12
A. Human Health Risk Assessment	12
1. Dietary Risk from Food	12
a. Toxicity	12
b. FQPA Safety Factor	13
c. Population Adjusted Dose (PAD)	13
d. Exposure Assumptions	14
e. Food Risk Characterization	14
2. Dietary Risk from Drinking Water	15
a. Surface Water	16
b. Ground Water	16
c. Drinking Water Levels of Comparison (DWLOCs)	17
i. DWLOCs for Acute Exposure	17
ii. DWLOCs for Chronic Exposure	17
iii. DWLOCs for Cancer	18
3. Aggregate Risks (Food and Water)	19
a. Acute Aggregate Risk	19
b. Chronic (Non-Cancer) Aggregate Risk	19
c. Aggregate Risk for Cancer	19
4. Occupational Risk	20
a. Toxicity	20
b. Exposure	21
c. Occupational Handler Risk Summary	23
i. Agricultural Handler Risk	24
ii. Post-Application Occupational Risk	31
5. Human Incident Data	33

B.	Environmental Risk Assessment	34
1.	Environmental Fate and Transport	34
2.	Ecological Toxicity	35
a.	Risk to Birds and Mammals	35
b.	Risk to Aquatic Species	36
c.	Endangered Species	37
3.	Ecological Incidents	38
IV.	Risk Management and Reregistration Decision	39
A.	Determination of Reregistration Eligibility	39
B.	Summary of Public Comments and Responses	39
C.	Regulatory Position	41
1.	FQPA Assessment	41
a.	“Risk Cup” Determination	41
b.	Determination of Safety for U.S. Population	41
c.	Determination of Safety for Infants and Children	42
d.	Endocrine Disruptor Effects	42
e.	Cumulative Risks	43
f.	Tolerances Summary	43
i.	Tolerances Listed Under 40 CFR §180.259(a)	43
ii.	Tolerances to be Proposed Under 40 CFR §180.259(a)	45
iii.	Tolerances Listed Under 40 CFR §180.259(b)	45
iv.	Codex Harmonization	48
D.	Regulatory Rationale	49
1.	Human Health Risk Management	49
a.	Dietary (Food) Risk Mitigation	49
i.	Acute Dietary (Food)	49
ii.	Chronic Dietary (Food)	50
iii.	Chronic Cancer Dietary (Food)	50
iv.	Drinking Water	50
v.	Aggregate Risk Mitigation (acute and chronic)	52
b.	Occupational Risk Mitigation	53
i.	Handler Exposure	53
ii.	Post-application Exposure	54
2.	Environmental Risk Mitigation	58
a.	Avian and Mammalian Risk Mitigation	58
b.	Aquatic Risk Mitigation	59
c.	Benefits	60
3.	Other Label Statements	62
a.	Endangered Species Statement	62
b.	Spray Drift Management	62
V.	What Registrants Need To Do	64

A.	Manufacturing Use Products	64
1.	Additional Generic Data Requirements	64
2.	Labeling for Manufacturing Use Products	64
B.	End-Use Products	65
1.	Additional Generic Data Requirements	65
2.	Labeling for End-Use Products	65
C.	Existing Stocks	65
D.	Labeling Changes Summary Table	65
VI.	Related Documents and How To Access Them	78
	Appendix A: Propargite Use Patterns Eligible for Reregistration	79
	Appendix B: Table of Generic Data Requirements and Studies Used To Make the Reregistration Eligibility Decision	95
	Appendix C: Technical Support Documents	105
	Appendix D: Citations Considered To Be Part Of The Database Supporting the Interim Reregistration Eligibility Decision (Bibliography)	106
	Appendix E: Generic Data Call-In	108
	Appendix F: Product-Specific Data Call-In	110
	Appendix G: EPA Batching of End Use Products for Meeting Data Requirements for Reregistration	111
	Appendix H: List of Registrants Sent this Data Call-In	113
	Appendix I: List of Available Documents and Electronically Available Forms	115

PROPARGITE TEAM

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Health Effects Risk Assessment

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GLOSSARY OF TERMS AND ABBREVIATIONS

AE	Acid Equivalent
a.i.	Active Ingredient
AGDCI	Agricultural Data Call-In
ai	Active Ingredient
aPAD	Acute Population Adjusted Dose
AR	Anticipated Residue
ARC	Anticipated Residue Contribution
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CI	Cation
CNS	Central Nervous System
cPAD	Chronic Population Adjusted Dose
CSF	Confidential Statement of Formula
CFR	Code of Federal Regulations
CSFII	USDA Continuing Surveys for Food Intake by Individuals
DCI	Data Call-In
DEEM	Dietary Exposure Evaluation Model
DFR	Dislodgeable Foliar Residue
DRES	Dietary Risk Evaluation System
DWEL	Drinking Water Equivalent Level (DWEL) The DWEL represents a medium specific (i.e., drinking water) lifetime exposure at which adverse, noncarcinogenic health effects are not anticipated to occur.
DWLOC	Drinking Water Level of Comparison.
EC	Emulsifiable Concentrate Formulation
EEC	Estimated Environmental Concentration. The estimated pesticide concentration in an environment, such as a terrestrial ecosystem.
EP	End-Use Product
EPA	U.S. Environmental Protection Agency
FAO	Food and Agriculture Organization
FDA	Food and Drug Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FFDCA	Federal Food, Drug, and Cosmetic Act
FQPA	Food Quality Protection Act
FOB	Functional Observation Battery
G	Granular Formulation
GENEEC	Tier I Surface Water Computer Model
GLC	Gas Liquid Chromatography
GLN	Guideline Number
GM	Geometric Mean
GRAS	Generally Recognized as Safe as Designated by FDA
HA	Health Advisory (HA). The HA values are used as informal guidance to municipalities and other organizations when emergency spills or contamination

	situations occur.
HAFT	Highest Average Field Trial
HDT	Highest Dose Tested
IR	Index Reservoir
LC ₅₀	Median Lethal Concentration. A statistically derived concentration of a substance that can be expected to cause death in 50% of test animals. It is usually expressed as the weight of substance per weight or volume of water, air or feed, e.g., mg/l, mg/kg or ppm.
LD ₅₀	Median Lethal Dose. A statistically derived single dose that can be expected to cause death in 50% of the test animals when administered by the route indicated (oral, dermal, inhalation). It is expressed as a weight of substance per unit weight of animal, e.g., mg/kg.
LEL	Lowest Effect Level
LOC	Level of Concern
LOD	Limit of Detection
LOAEL	Lowest Observed Adverse Effect Level
MATC	Maximum Acceptable Toxicant Concentration
MCLG	Maximum Contaminant Level Goal (MCLG) The MCLG is used by the Agency to regulate contaminants in drinking water under the Safe Drinking Water Act.
mg/kg/day	Milligram Per Kilogram Per Day
mg/L	Milligrams Per Liter
MOE	Margin of Exposure
MP	Manufacturing-Use Product
MPI	Maximum Permissible Intake
MRID	Master Record Identification (number). EPA's system of recording and tracking studies submitted.
NA	Not Applicable
N/A	Not Applicable
NAWQA	USGS National Water Quality Assessment
NOEC	No Observable Effect Concentration
NOEL	No Observed Effect Level
NOAEL	No Observed Adverse Effect Level
NPDES	National Pollutant Discharge Elimination System
NR	Not Required
OP	Organophosphate
OPP	EPA Office of Pesticide Programs
OPPTS	EPA Office of Prevention, Pesticides and Toxic Substances
Pa	pascal, the pressure exerted by a force of one newton acting on an area of one square meter.
PAD	Population Adjusted Dose
PADI	Provisional Acceptable Daily Intake
PAG	Pesticide Assessment Guideline
PAM	Pesticide Analytical Method
PCA	Percent Crop Area

PDP	USDA Pesticide Data Program
PHED	Pesticide Handler's Exposure Data
PHI	Preharvest Interval
ppb	Parts Per Billion
PPE	Personal Protective Equipment
ppm	Parts Per Million
PRN	Pesticide Registration Notice
PRZM/ EXAMS	Tier II Surface Water Computer Model
Q ₁ *	The Carcinogenic Potential of a Compound, Quantified by the EPA's Cancer Risk Model
RAC	Raw Agriculture Commodity
RBC	Red Blood Cell
RED	Reregistration Eligibility Decision
REI	Restricted Entry Interval
RfD	Reference Dose
RQ	Risk Quotient
RS	Registration Standard
RUP	Restricted Use Pesticide
SAP	Science Advisory Panel
SCI-GROW	Tier I Ground Water Computer Model
SF	Safety Factor
SLC	Single Layer Clothing
SLN	Special Local Need (Registrations Under Section 24(c) of FIFRA)
TC	Toxic Concentration. The concentration at which a substance produces a toxic effect.
TD	Toxic Dose. The dose at which a substance produces a toxic effect.
TEP	Typical End-Use Product
TGAI	Technical Grade Active Ingredient
TLC	Thin Layer Chromatography
TMRC	Theoretical Maximum Residue Contribution
torr	A unit of pressure needed to support a column of mercury 1 mm high under standard conditions.
TRR	Total Radioactive Residue
UF	Uncertainty Factor
µg/g	Micrograms Per Gram
µg/L	Micrograms Per Liter
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UV	Ultraviolet
WHO	World Health Organization
WP	Wettable Powder
WPS	Worker Protection Standard

Executive Summary

EPA has completed its review of public comments on the preliminary risk assessments and is issuing its risk management decision for propargite. The revised risk assessments are based on review of the required target data base supporting the use patterns of currently registered products and additional information received. The Agency invited stakeholders to provide proposals, ideas or suggestions on appropriate mitigation measures before the Agency issued its risk mitigation decision on propargite. After considering the risks identified in the revised risk assessment, mitigation measures proposed by Uniroyal Chemical Company, the technical registrant of propargite, and comments and mitigation suggestions from other interested parties, EPA developed its risk management decision for uses of propargite that pose risks of concern. This decision is discussed fully in this document.

Propargite is an organosulfur miticide/acaricide used on a variety of bearing and non-bearing agricultural food crops, as well as non-food agricultural sites. It was first registered in 1969. Approximately 2 million pounds of propargite active ingredient are applied annually. Sites on which propargite has the highest percent of crop treated include grapes, walnuts, almonds, nectarines, and mint.

The Food Quality Protection Act (FQPA) requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider "available information" concerning the cumulative effects of a particular pesticide's residues and "other substances that have a common mechanism of toxicity." The Agency does not believe that propargite shares a common mechanism of toxicity with other chemicals. Although chemical class is not necessarily synonymous with a common mechanism of toxicity, structurally similar chemical substances do frequently exhibit common modes of toxicity and may be considered together by EPA for purposes of cumulative risk assessment. Propargite is the only organosulfur chemical that is subject to reregistration under FIFRA and tolerance reassessment under the FQPA. Therefore, propargite is not subject to any cumulative risk assessment as required by the Food Quality Protection Act (FQPA).

Overall Risk Summary

EPA's human health risk assessment for propargite indicates that food risk, both acute and chronic, are not a concern (2% of aPAD and <1% of cPAD). The drinking water risk estimates for acute and chronic exposures, based on screening models and USGS monitoring data, are also not of concern for either ground or surface waters. Propargite is classified as a B2 chemical carcinogen based on the appearance of intestinal tumors in test animals. The cancer dietary risk from food alone is 1.8×10^{-7} for the general U.S. population, and is not a concern for the Agency. However, the cancer drinking water risk from surface water alone may be of concern, based on the screening models and USGS/NAWQA monitoring data. There are also concerns for workers who mix, load, and apply propargite to agricultural sites. Finally, EPA has identified a chronic reproductive risk of concern to birds and mammals, and some risk to aquatic species.

To mitigate risks of concern posed by the uses of propargite, EPA considered the mitigation

proposal submitted by the technical registrant, as well as comments and mitigation ideas from other interested parties, and has decided on a number of label amendments to address the worker, and ecological concerns. Results of the risk assessments, and required label amendments to mitigate those risks, are presented in this RED.

Dietary Risk – Food

EPA's dietary risk analysis consists of three parts: acute dietary risk, chronic (non-cancer) dietary risk, and chronic cancer risk. The acute dietary exposure analysis was performed using a refined Tier 3 approach based on the Dietary Exposure Evaluation Model (DEEM™). The DEEM™ analysis evaluated the individual food consumption as reported by respondents in the USDA 1989-91 Continuing Surveys for Food Intake by Individuals (CSFII) and accumulated exposure to the chemical for each commodity. Under this analysis, a risk estimate that is less than 100% of the acute Population Adjusted Dose ("aPAD") (the dose at which an individual could be exposed on any given day and no adverse health effects would be expected) does not exceed the Agency's level of concern. Based on the estimates for acute exposure to propargite, the percentage of aPAD utilized is 2 percent; therefore the acute dietary (food) risk estimate for propargite is not of concern.

For the chronic (non-cancer) dietary risk assessment, an average of consumption values for each sub-population is combined with average residue values in/on commodities over a 70-year lifetime to determine average exposure. A risk estimate that is less than 100% of the chronic PAD (the dose at which an individual could be exposed over the course of a lifetime and no adverse health effects would be expected) does not exceed the Agency's level of concern.

The chronic dietary analysis utilized USDA Pesticide Data Program (PDP) monitoring data, field trial data, calculated livestock anticipated residues, and percent crop treated information. Based on that analysis, the percentage of cPAD utilized is expected to be less than 1 percent for the U.S. population and all subpopulations. Therefore, the chronic dietary (food) risk estimate is also not of concern.

Chronic (cancer) dietary risk is also calculated by using the average consumption values for food and average residue values for those foods over a 70-year lifetime. The chronic exposure value is combined with a linear low-dose risk model ("Q₁*") to determine the lifetime (cancer) risk estimate. The Agency generally considers risks greater than 1×10^{-6} (1 in 1 million) to exceed its level of concern for cancer dietary exposure. Propargite is classified as a B2 chemical carcinogen (likely human carcinogen), based on the appearance of intestinal tumors in rats. The results of the Q₁* model indicate that the cancer dietary risk from food alone is 1.8×10^{-7} for the general U.S. population. Therefore, the cancer dietary risk from food alone is not a concern.

Dietary Risk – Drinking Water

Drinking water exposure to pesticides can occur through groundwater and surface water contamination. EPA considers acute (one day) and chronic (lifetime) drinking water risks and uses either modeling or actual monitoring data, if available, to estimate those risks. To determine the

maximum allowable contribution from water allowed in the diet, EPA first looks at how much of the overall allowable risk is contributed by food and then determines a “drinking water level of comparison” (DWLOC) to determine whether modeled or monitoring estimated environmental concentration (EEC) levels exceed this level. EECs that are above the corresponding DWLOC exceed the Agency’s level of concern. Modeling is generally considered to be an unrefined assessment and provides high-end estimates.

Based on modeling data, the acute drinking water exposures for females 13-50 years old for surface water and groundwater were less than the acute DWLOC of 2400 ppb. Since the EEC of 34 ppb for surface water and 0.006 for groundwater is less than the DWLOC, the acute dietary risk from food and drinking water are not a concern. Similarly, modeling data for chronic drinking water concentrations for surface water and groundwater exposures also indicated that chronic dietary risk from food and drinking water are not of concern. The DWLOCs were 1400 ppb for the U.S. population and 400 ppb for infants and children compared to a chronic EEC of 8.7 for surface water and 0.006 for groundwater. However, modeling data does indicate a concern for cancer. The EECs for surface water of 4.8 ppb exceed the cancer DWLOC of 0.71 ppb.

Although the cancer drinking water risk estimates from surface water is above the Agency’s level of concern, the Agency believes the modeling estimates and monitoring data upon which the assessment is based are conservative. Actual drinking water exposure to propargite from surface water sources is expected to be less. Moreover, the registrant has agreed to add label statements prohibiting application of propargite by ground within 50 feet or by air within 75 feet of aquatic areas to mitigate the drinking water (and ecological) risk concerns. The registrant has also agreed to conduct a drinking water monitoring study to confirm the Agency’s belief that drinking water exposures will not exceed the level of concern.

Residential Risk

Use of propargite in residential settings is not permitted. Therefore, the Agency does not expect residential exposures to propargite.

Aggregate Risk

An aggregate risk assessment looks at the combined risk from dietary exposure (food and drinking water routes) as well as exposures from non-occupational sources (e.g., residential uses). Generally, all risks from these exposures must have MOEs of greater than 100 to be not of concern to the Agency. Because there are no residential uses of propargite, the aggregate risks are limited to dietary (food and water) exposure. The risks from those combined exposures are discussed above in the preceding “Dietary Risk - Drinking Water” section.

Occupational Risk

Occupational exposure to propargite is of concern to the Agency, and it has been determined

that a number of mitigation measures are required. For the agricultural uses of propargite, several mixer/loader/applicator risk scenarios currently exceed the Agency's level of concern (i.e., dermal MOEs are less than 100) at baseline level of protection (shoes, socks, long-sleeved shirts and long pants, and no gloves) for acute and chronic health effects. Also, mixer and loader cancer risks, when calculated without personal protective equipment or engineering controls, can range up to 1×10^{-3} . That estimate also exceeds the Agency's level of concern. EPA believes these risks can be mitigated to an acceptable level with the following label restrictions: (1) requiring use of personal protective equipment for certain scenarios; (2) requiring engineering controls for certain scenarios; (3) increasing restricted entry intervals for certain uses, and (4) reclassifying propargite as a restricted use pesticide.

Ecological Risk

Ecological risks are of concern to the Agency. Based on toxicity studies submitted by the Registrant, propargite poses a potential for adverse effects on reproduction in birds and mammals. Risk to aquatic organisms and plants is generally lower than the risk for birds and mammals; however, the chronic risk concern levels for freshwater invertebrates and freshwater fish are either approached or exceeded for over 60 days from multiple propargite applications. Propargite is also expected to be highly toxic to amphibians. To address these ecological risks, the registrant has agreed to:

- Decrease seasonal maximum rates for several high use crops. See Table 11.
- Add spray intervals of 21 days for most food crops (28 days for citrus). See Table 12.
- Decrease the number of annual applications for cotton.
- Add label statements prohibiting application of propargite by ground within 50 feet or by air within 75 feet of aquatic areas.
- Add label requirements to minimize spray drift exposures.
- Conduct testing to better characterize exposure and risk to birds.

The reclassification of propargite to restricted use may also help address the concerns related to runoff to aquatic areas. Additionally, as noted in the drinking water description above, the registrant will be conducting a surface water monitoring study to address drinking water concerns. Although that study will not be directed specifically at ecological risk, it is expected to produce data useful to assessing ecological risks as well.

Conclusions

The Agency is issuing this Reregistration Eligibility Document (RED) for Propargite, as announced in a Notice of Availability published in the *Federal Register*. This RED document includes guidance and time frames for complying with any required label changes for products containing propargite. With the addition of the label restrictions and amendments detailed in this document, the Agency has determined that all currently registered uses of propargite are eligible for reregistration.

There is a 60-day public comment period for this document.

Peanuts	22,500	2.9 %	0.78 %
Potatoes	43,000	5.9 %	2.1 %
Sorghum	2,800	0.4 %	0.2 %
Sugar Beets	5,000	0.2 %	0.1 %
Walnuts	120,000	46.3%	25.3%

¹ Uses with more than 1,000,000 acres grown or over 20% crop treated were selected as representative sites.

² Weighted Average is based on data for 1988 through 1998; the most recent years and more reliable data are weighted more heavily.

Anticipated use patterns and application methods, range of application rates, and daily amount of acres treated were derived from current product labeling. Application rates specified on propargite labels range from 0.5 to 4.5 pounds of active ingredient per acre in agricultural settings. The Agency typically uses acres treated per day values that are thought to represent 8 hours of application work for specific types of application equipment.

EPA calculated the baseline MOE (short-term and intermediate-term) and cancer risk for each of the exposure scenarios using the following **baseline** PPE assumptions: Long-sleeved shirt, long pants, shoes (or boots) and socks (no gloves).

If the short-term or intermediate-term MOE calculated using this baseline PPE was 100 or greater for an exposure scenario, then no further calculations were made. If the baseline short-term or intermediate-term MOE was less than 100 for any exposure scenario, an additional short-term or intermediate-term MOE was calculated based on increasing the levels of protection (additional PPE). EPA calculated a short-term and/or intermediate-term MOE using additional PPE for each occupational exposure scenario that had baseline total MOE of less than 100, using the following additional **PPE** assumptions:

- Baseline PPE + chemical resistant gloves.
- Coveralls over long sleeved shirt and long pants, chemical resistant gloves, chemical resistant footwear plus socks, and chemical resistant headgear for over head exposures (such as airblast applications).

If the short-term or intermediate-term MOE calculated using this additional-PPE was 100 or greater for an exposure scenario, then no further calculations were made. If MOE remained less than 100 for any occupational exposure scenario, a short-term or intermediate-term MOE was calculated based on the mandatory use of engineering controls, where feasible. Engineering controls needed to address identified risks are noted in the final column of Table 8. EPA calculated the engineering-control short-term or intermediate-term MOE for each occupational exposure scenario with an additional-PPE short-term or intermediate-term MOE of less than 100, using the following **engineering control** assumptions:

- Occupational mixers and loaders handling liquid formulations using a closed system are wearing baseline PPE, chemical resistant gloves and chemical resistant apron.

Table 8: Exposure Variables, MOEs and Cancer for Agricultural uses of Propargite																
Exposure Scenario (Scenario #)	Crop Group	Crop	Application Rates (lb ai/acre)	Daily Acres Treated	Short-Term Dermal MOEs ^b			Intermediate-Term Dermal MOEs ^c			Inhalation MOEs ^e			Cancer ^f		
					Base line ^a	PPE	Eng Control	Base line ^a	PPE	Eng. Control	Base line ^d	PPE	Eng. Control	Base line	PPE	Eng. control
Mixer/Loader Exposure																
Mixing/Loading Liquids for Aerial Application (1a)	Roots and Tuber Vegetable	carrot, sugar beet, potatoes, dry beans, mint	Min 2.0	350	1	160	NA	<1	125	NA	4135	NA	NA	1.3E-3/ 2.7E-3	1.4E-5/ 2.8E-5	4.0E-6/ 8.0E-6
	Legume Vegetable		Max 2.5		1	130	NA	<1	100	NA	3305	NA	NA	1.6E-3/ 3.2E-3	1.7E-5/ 3.5E-5	5.0E-6/ 9.9E-6
	Herbs & Spices	hops	Max 2.5	80	4	560	NA	3	435	NA	14465	NA	NA	3.6E-4/ 7.3E-4	4.0E-6/ 7.9E-5	1.2E-6/ 2.3E-6
	Citrus Fruits	grapefruit, orange	Max 2.5	125	3	360	NA	2	280	NA	9260	NA	NA	5.6E-4/ 1.1E-3	6.3E-6/ 1.3E-5	1.8E-6/ 3.6E-6
	Tree Nuts	almond, walnut	Min 2.5	125	3	360	NA	2	280	NA	9260	NA	NA	5.6E-4/ 1.1E-3	6.3E-6/ 1.3E-5	1.8E-6/ 3.6E-6
			Max 4.5		2	200	NA	1	155	NA	5145	NA	NA	1.0E-3/ 2.0E-3	1.1E-5/ 2.2E-5	3.3E-6/ 6.5E-6
	Cereal Grains	corn (field, pop, sweet), sorghum grain, alfalfa, clover	Min 1.5	350	2	215	NA	1	165	NA	5510	NA	NA	9.6E-4/ 1.9E-3	1.1E-5/ 2.1E-5	3.1E-6/ 6.1E-6
				1200	<1	60	170	<1	50	130	1600	NA	NA	3.3E-3/ 6.6E-3	3.8E-5/ 7.5E-5	1.1E-5/ 2.2E-5
			Max 2.5	350	1	130	NA	<1	100	NA	3305	NA	NA	1.6E-3/ 3.2E-3	1.7E-5/ 3.5E-5	5.0E-6/ 9.9E-6
	Non-grass Animal Feed			1200	<1	35	100	<1	30	80	960	1400	NA	5.5E-3/ 1.1E-2	5.8E-5/ 1.2E-4	1.7E-5/ 3.4E-5
			Max 1.6	350	2	200	NA	1	155	NA	5165	NA	NA	1.0E-3/ 2.0E-3	1.1E-5/ 2.2E-5	3.3E-6/ 6.5E-6
	Oil Seed	cotton		1200	<1	60	155	<1	45	120	1505	NA	NA	3.6E-4/ 7.3E-4	4.0E-5/ 7.9E-5	1.1E-5/ 2.2E-5
			Min 1.5	350	2	215	NA	1	165	NA	5510	NA	NA	9.6E-4/ 1.9E-3	1.1E-5/ 2.1E-5	3.1E-6/ 6.1E-6
			Max 2.5	1	130	NA	<1	100	NA	3305	NA	NA	1.6E-3/ 3.2E-3	1.7E-5/ 3.5E-5	5.0E-6/ 9.9E-5	
Ornamental plants		Christmas Tree conifer seed	Max 2.5	125	3	360	NA	2	280	NA	9260	NA	NA	5.6E-4/ 1.1E-3	6.3E-6/ 1.3E-5	1.8E-6/ 3.6E-6
Mixing/Loading Liquids for Chemigation (1b)	Roots and vegetable	potatoes, corn (sweet)	Min 2.0	350	1	160	NA	1	125	NA	4135	NA	NA	1.3E-3/ 2.6E-3	1.4E-5/ 2.8E-5	4.0E-6/ 7.9E-6
	Cereal Grains		Max 2.5		1	130	NA	<1	100	NA	3305	NA	NA	1.6E-3/ 3.2E-3	1.7E-5/ 3.5E-5	5.0E-6/ 9.9E-6

Exposure Scenario (Scenario #)	Crop Group	Crop	Application Rates (lb ai/acre)	Daily Acres Treated	Short-Term Dermal MOEs ^b			Intermediate-Term Dermal MOEs ^c			Inhalation MOEs ^c			Cancer ^f			
					Base line ^a	PPE	Eng Control	Base line ^a	PPE	Eng. Control	Base line ^d	PPE	Eng. Control	Base line	PPE	Eng. control	
Mixing/Loading Liquids for Groundboom Application (1c)	Roots and Vegetable	potatoes, corn (field, pop, sweet) sorghum grain, alfalfa, clover, cotton, peanut, jojoba and mint	Min 1.5	80	7	930	NA	6	725	NA	24110	NA	NA	2.2E-4/ 4.4E-4	2.4E-6/ 4.8E-6	6.9E-7/ 1.4E-6	
	Cereal Grains																
	Non-grass Animal Feed																
	Oil Seed																
	Herbs and Spices				Max 2.5	4	560	NA	3	435	NA	14465	NA	NA	3.6E-4/ 7.3E-4	4.0E-6/ 7.9E-6	1.2E-6/ 2.3E-6
Mixing/Loading Liquids for Airblast Sprayer Application (1d)	Pome Fruits	quince, cherry, prunes, orange, grapefruit lemon, lime, tangerine, boysenberry, current, date raspberry, hops, persimmons,	1.5	40	15	1865	NA	10	1450	NA	48220	NA	NA	1.1E-4/ 2.2E-4	1.2E-6/ 2.4E-6	3.6E-7/ 7.3E-7	
	Stone fruits																
	Citrus Fruits																
	Berries																
	Herbs and Spices																
	Tropical and Subtropical Fruits																
	Tree Nuts	almond, filbert, macadamia nut, pecan, pistachio	Min 1.5	15	1865	NA	10	1450	NA	48220	NA	NA	1.1E-4/ 2.2E-4	1.2E-6/ 2.4E-6	3.6E-7/ 7.3E-7		
			Max 3.0	7	930	NA	6	725	NA	24110	NA	NA	2.2E-4/ 4.4E-4	2.4E-6/ 4.8E-6	6.9E-7/ 1.4E-6		
		walnut	Max 4.5	5	620	NA	4	485	NA	16075	NA	NA	3.3E-4/ 6.6E-4	3.6E-6/ 7.3E-6	1.1E-6/ 2.1E-6		
	Ornamental plants	Christmas Tree plantation, conifers, shade trees	Max 2.5		9	1120	NA	7	870	NA	28935	NA	NA	1.9E-4/ 3.7E-4	2.0E-6/ 4.0E-6	5.9E-7/ 1.2E-6	
Mixing/Loading Liquids for Application of High Pressure Handwand (1e)	Non-bearing nursery stock	all crops	Max 1.5	5	120	NA	NA	90	11595	NA	385780	NA	NA	1.4E-5/ 2.8E-5	5.0E-6/ 9.9E-6	6.9E-8/ 1.4E-7	
Mixing/Loading Wettable Powder for Aerial Application (2a)	Stone fruits	nectarine	Max 3.0	125	2	40	325	1	30	255	215	2155	NA	9.6E-4/ 1.9E-3	1.0E-4/ 2.0E-4	5.3E-6/ 1.1E-5	
	Tree Nuts	walnut	Max 4.0		1	30	245	1	25	190	160	1615	NA	1.3E-3/ 2.6E-3	1.4E-4/ 2.8E-4	7.9E-6/ 1.6E-5	
	Ornamental plants	Christmas Tree	Max 2.5	125	2	50	390	2	40	305	255	2585	NA	7.9E-4/ 1.6E-3	8.6E-5/ 1.7E-4	4.6E-6/ 9.2E-6	

Exposure Scenario (Scenario #)	Crop Group	Crop	Application Rates (lb ai/acre)	Daily Acres Treated	Short-Term Dermal MOEs ^b			Intermediate-Term Dermal MOEs ^c			Inhalation MOEs ^c			Cancer ^f		
					Base line ^a	PPE	Eng Control	Base line ^a	PPE	Eng. Control	Base line ^d	PPE	Eng. Control	Base line	PPE	Eng. control
Mixing/Loading Wettable Powder for Groundboom Application (2b)	Oil Seed	peanut	Max 1.6	80	5	120	NA	4	90	745	625	6310	NA	3.2E-6/ 6.5E-4	4.0E-5/ 7.9E-5	1.8E-6/ 3.6E-6
Mixing/ Loading Wettable Powder for Airblast Sprayer Application (2c)	Citrus fruits	grapefruit, orange, lemon, avocado	Min 3.0	40	6	125	NA	5	100	NA	665	6730	NA	3.0E-4/ 6.0E-4	3.6E-5/ 7.3E-5	1.7E-6/ 3.4E-6
	Tropical and subtropical fruits		Max 4.5		4	85	680	3	65	530	445	4485	NA	4.6E-4/ 9.2E-4	5.3E-5/ 1.1E-4	2.6E-6/ 5.1E-6
	Herbs & spices	hops	Min 2.0		9	190	NA	7	145	NA	1000	NA	NA	2.0E-4/ 4.0E-4	2.4E-5/ 4.8E-5	1.2E-6/ 2.3E-6
			Max 2.5		7	150	NA	5	120	NA	800	8075	NA	2.5E-4/ 5.0E-4	3.0E-5/ 5.9E-5	1.5E-6/ 2.9E-6
	Small Fruits	grapes	Max 3.0		6	125	NA	5	100	NA	665	6730	NA	3.0E-4/ 6.0E-4	3.6E-5/ 7.3E-5	1.7E-6/ 3.4E-6
Mixing/ Loading Wettable Powder for Application of High Pressure Handwand (2d)	Non- bearing Nursery Stock	all crops	Min 0.5	5	280	NA	NA	215	NA	NA	32000	NA	NA	6.6E-6/ 1.3E-5	2.7E-7/ 5.3E-7	NA
			Max 2.5		55	1210	NA	45	940	NA	6400	NA	NA	3.2E-5/ 6.3E-5	1.4E-6/ 2.7E-6	NA
Applicator Exposure																
Applying Sprays with Fixed-Wing Aircraft–Enclosed Cockpit (3)	Roots and Tuber Vegetable	carrot, sugar beet, potatoes, dry beans, mint	Min 2.0	350	NA	NA	735	NA	NA	570	NA	NA	72940	NA	NA	2.4E-6/ 4.9E-6
			Max 2.5		NA	NA	585	NA	NA	455	NA	NA	58355	NA	NA	3.0E-5/ 6.1E-5
	Legume Vegetable															
	Herbs and Spices	hops	Max 2.5	80	NA	NA	2570	NA	NA	2000	NA	NA	255295	NA	NA	6.9E-7/ 1.4E-6
	Citrus fruits	grapefruit, orange	Max 2.5	125	NA	NA	1645	NA	NA	1280	NA	NA	163390	NA	NA	1.1E-6/ 2.2E-6
	Tree Nuts	almond, walnut	Min 2.5		NA	NA	1645	NA	NA	1280	NA	NA	163390	NA	NA	1.1E-6/ 2.2E-6
			Max 4.5		NA	NA	915	NA	NA	710	NA	NA	90770	NA	NA	1.9E-6/ 3.9E-6
Cereal Grains	corn (field, pop, sweet), sorghum grain, alfalfa, clover	Min 1.5	350	NA	NA	980	NA	NA	760	NA	NA	97255	NA	NA	1.8E-6/ 3.6E-6	

Exposure Scenario (Scenario #)	Crop Group	Crop	Application Rates (lb ai/acre)	Daily Acres Treated	Short-Term Dermal MOEs ^b			Intermediate-Term Dermal MOEs ^c			Inhalation MOEs ^e			Cancer ^f															
					Base line ^a	PPE	Eng Control	Base line ^a	PPE	Eng. Control	Base line ^d	PPE	Eng. Control	Base line	PPE	Eng. control													
				1200	NA	NA	290	NA	NA	220	NA	NA	28000	NA	NA	6.2E-6/ 1.3E-5													
	Non-Grass animal Feed			Max 2.5	350	NA	NA	590	NA	NA	455	NA	NA	58355	NA	NA	3.0E-6/ 6.1E-6												
				1200	NA	NA	170	NA	NA	130	NA	NA	17000	NA	NA	1.1E-5/ 2.2E-5													
	Oil Seed	peanut, jojoba		Min 1.5	350	NA	NA	980	NA	NA	760	NA	NA	97255	NA	NA	1.9E-6/ 3.9E-6												
				Max 2.5		NA	NA	590	NA	NA	455	NA	NA	583550	NA	NA	6.6E-6/ 1.3E-5												
		cotton		Max 1.6	350	NA	NA	920	NA	NA	715	NA	NA	91175	NA	NA	1.8E-6/ 3.6E-6												
				1200	NA	NA	270	NA	NA	210	NA	NA	26595	NA	NA	3.0E-6/ 6.1E-6													
	Stone fruit	nectarine		Max 3.0	125	NA	NA	1370	NA	NA	1065	NA	NA	136155	NA	NA	1.3E-6/ 2.6E-6												
	Ornamental plants	Christmas tree, conifer seed		Max 2.5	125	NA	NA	1645	NA	NA	1280	NA	NA	163390	NA	NA	1.1E-6/ 2.2E-6												
	Applying Sprays with a Groundboom Sprayer (4)	Roots and Vegetable	potatoes, corn (field, pop, sweet) sorghum grain, alfalfa, clover, cotton, peanut, jojoba and mint		80	1530	NA	NA	1190	NA	NA	39100	NA	NA	1.4E-6/ 2.7E-6	1.2E-6/ 2.4E-6	4.0E-7/ 7.9E-7												
Cereal Grain																													
Non-grass animal feed		Max 2.5																920	NA	NA	715	NA	NA	23460	NA	NA	2.4E-6/ 4.9E-6	2.0E-6/ 4.1E-6	6.9E-7/ 1.4E-6
oil seed																													
herbs and spices																													

Exposure Scenario (Scenario #)	Crop Group	Crop	Application Rates (lb ai/acre)	Daily Acres Treated	Short-Term Dermal MOEs ^b			Intermediate-Term Dermal MOEs ^c			Inhalation MOEs ^e			Cancer ^f			
					Base line ^a	PPE	Eng Control	Base line ^a	PPE	Eng. Control	Base line ^d	PPE	Eng. Control	Base line	PPE	Eng. control	
Applying Sprays with an Airblast Sprayer (5)	pome fruits	quince, cherry, prunes, orange, grapefruit, lemon, lime, tangerine, boysenberry, current, hops, raspberry, date, persimmons, almond, filbert, macadamia nut, pecan, pistachio, walnut, Christmas Tree plantation, conifers, shade trees	Min 1.5	40	120	NA	NA	95	140	NA	12860	NA	NA	1.5E-5/ 3.0E-5	1.1E-5/ 2.1E-5	2.0E-6/ 4.0E-6	
	stone fruits																
	citrus fruits																
	berries																
	tropical & subtropical fruits				Max 4.5	40	120	750	30	90	570	4285	NA	NA	4.6E-5/ 9.2E-5	3.1E-5/ 6.2E-5	6.9E-6/ 1.4E-5
	small fruits																
	tree nuts																
ornamental plants																	
Applying Liquids with a High Pressure Handwand (6)	non-bearing nursery stock	all crops	Min 0.5	5	570	NA	NA	445	NA	NA	17580	NA	NA	3.6E-6/ 7.3E-6	1.9E-6/ 3.8E-6	NA	
			Max 2.5		115	NA	NA	90	250	NA	3515	NA	NA	1.9E-5/ 3.8E-5	9.6E-6/ 1.9E-5	NA	

Table 8: Exposure Variables, MOEs and Cancer for Agricultural uses of Propargite																
Exposure Scenario (Scenario #)	Crop Group	Crop	Application Rates (lb ai/acre)	Daily Acres Treated	Short-Term Dermal MOEs ^b			Intermediate-Term Dermal MOEs ^c			Inhalation MOEs ^e			Cancer ^f		
					Base line ^a	PPE	Eng Control	Base line ^a	PPE	Eng. Control	Base line ^d	PPE	Eng. Control	Base line	PPE	Eng. control
Flagger Exposure																
Flagging During Aerial Spray Application (7)	Roots & tuber Vegetable	carrot, sugar beet, potatoes, dry beans, mint	Min 2.0	350	335	NA	NA	260	NA	NA	14170	NA	NA	5.9E-6/ 1.2E-5	4.6E-6/ 9.1E-6	1.2E-7/ 2.4E-7
	legume vegetable		Max 2.5		265	NA	NA	210	NA	NA	11335	NA	NA	7.6E-6/ 1.5E-5	5.7E-6/ 1.1E-5	1.5E-7/ 3.0E-7
	herbs and spices	hops	Ma 2.5	80	1170	NA	NA	910	NA	NA	49600	NA	NA	1.7E-6/ 3.4E-6	1.3E-6/ 2.6E-6	3.4E-8/ 6.9E-8
	Citrus fruits	grapefruit, orange	Max 2.5	125	750	NA	NA	580	NA	NA	31745	NA	NA	2.7E-6/ 5.4E-6	2.0E-6/ 4.1E-6	5.3E-8/ 1.1E-7
	Tree Nut	almond, walnut	Min 2.5	125	750	NA	NA	580	NA	NA	31745	NA	NA	2.7E-6/ 5.4E-6	2.0E-6/ 4.1E-6	5.3E-8/ 1.1E-7
			Max 4.5		415	NA	NA	325	NA	NA	17635	NA	NA	5.0E-6/ 9.9E-6	3.7E-6/ 7.3E-6	9.6E-8/ 1.9E-7
	cereal grain	(field, pop, sweet), sorghum grain, alfalfa, clover	Min 1.5	350	445	NA	NA	345	NA	NA	18895	NA	NA	4.6E-6/ 9.2E-6	3.4E-6/ 6.8E-6	9.0E-8/ 1.8E-7
	non-grass animal feed		Max 2.5		265	NA	NA	210	NA	NA	11335	NA	NA	7.6E-6/ 1.5E-5	5.7E-6/ 1.1E-5	1.5E-7/ 3.0E-7
	oil seed	cotton	Max 1.6	350	415	NA	NA	325	NA	NA	17715	NA	NA	5.0E-6/ 9.9E-6	3.6E-6/ 7.3E-6	9.6E-8/ 1.9E-7
				1200	120	NA	NA	100	NF	NA	5165	NA	NA	1.7E-5/ 3.3E-5	1.2E-5/ 2.5E-5	3.3E-7/ 6.6E-7
		Peanut, jojoba	Min 1.5	350	445	NA	NA	345	NA	NA	18895	NA	NA	4.6E-6/ 9.2E-6	3.4E-6/ 6.8E-6	9.0E-8/ 1.8E-7
			Max 2.5		265	NA	NA	210	NA	NA	11335	NA	NA	7.6E-6/ 1.5E-5	5.7E-6/ 1.1E-5	1.5E-7/ 3.0E-7
	Stone fruits	nectarine	Max 3.0	125	625	NA	NA	485	NA	NA	26455	NA	NA	3.2E-6/ 6.4E-6	1.1E-6/ 2.2E-6	6.4E-8/ 1.3E-7
Ornamental plants	Christmas tree conifer seed	Max 2.5	125	750	NA	NA	580	NA	NA	31745	NA	NA	2.7E-5/ 5.4E-5	2.0E-6/ 4.1E-6	5.3E-8/ 1.1E-7	

- a Baseline dermal unit exposure represents long pants, long sleeved shirt, **no gloves**, open mixing/loading, open cab tractor.
- b Short-term Dermal MOE = NOAEL (6 mg/kg/day)/Short-term Daily Dermal Dose (mg/kg/day).
- c Intermediate-term MOE = NOAEL (4 mg/kg/day)/Intermediate-term Daily Dermal Dose (mg/kg/day)
- d Baseline inhalation unit exposure represents no respirator
- e Inhalation MOE = LOAEL (49.6 mg/kg/day)/ Daily Inhalation Dose (mg/kg/day).
- f the lower end of the range represents 7 days of exposure for a private applicator. The higher end of the range represents 14 days of exposure for a commercial applicator.

Crop grouping	Crop	Activity	Intermediate -Term (days)				Cancer Risk at First Day MOE ≥ 100			
			2.5 lb ai/A	3.15 lb ai/A	4.5 lb ai/A	2.5 lb ai/A	3.15 lb ai/A	4.5 lb ai/A		
Citrus Fruits	Crop		2.5 lb ai/A	3.15 lb ai/A	4.5 lb ai/A	2.5 lb ai/A	3.15 lb ai/A	4.5 lb ai/A		
	Orange, Lemon, Lime, Tangerine, Grapefruit	Irrigation, Scouting, Hand weeding	0	2	8	4.82E-5	5.35E-5	5.28E-5		
		Pruning	16	20	26	5.35E-5	5.28E-5	5.18E-5		
		Harvesting	32	36	42	5.31E-5	5.21E-5	5.15E-5		
Pome Fruits	Crop		0.5 lb ai/A	1.5lb ai/A	2.5 lb ai/A	4.5 lb ai/A	0.5 lb ai/A	1.5 lb ai/A	2.5 lb ai/A	4.5 lb ai/A
	Quince, Cherry, Nectarine, Prune, Avocado, Date, Persimmons, X mas Tree, Ornamental and/or shade trees	Irrigation, Scouting, Hand weeding	0	0	0	0	5.97 E-6	1.97 E-5	2.98 E-5	5.38 E-5
Stone Fruits	Persimmons, X mas Tree, Ornamental and/or shade trees	Pruning	0	0	5	11	1.97 E-5	5.38 E-5	5.28 E-5	5.05 E-5
Tropical and Subtropical Fruits	Ornamental, Herbaceous Plants	Harvesting	0	9	14	20	4.75 E-5	5.54 E-5	5.45 E-5	5.21 E-5
Ornamental Plants										
Berries	Crop		2.0 lb ai/A				2.0 lb ai/A			
	Boysenberry, Currant, Raspberry	Irrigation, Hand weeding	0				9.74E-6			
		Scouting	0				1.95E-5			
		Harvesting, Pruning, tying	10				5.25E-5			
Small fruits	Crop		3.0 lb ai/acre				3.0 ai/A			
	Grape	Irrigation, Hand weeding	0				1.46E-5			
		Scouting	0				2.92E-5			
		Harvesting, Pruning, tying	16				5.41E-5			
		Cane turning	27				5.48E-5			
Tree Nuts	Crop		3.0 lb ai/A		4.5 lb ai/A		3.0 lb ai/A		4.5 ai/A	
	Almond, Filbert, Macadamia, Pecan, Pistachio, Walnut	Sweeping and blowing the nuts	Not available		Not available		Not available		Not available	
		Tree shakers	0	0	3.12E-6	4.69E-6				
		Scouting, Weeding, Irrigation	0	0	3.33E-5	4.98E-5				
		Pruning, Hand harvesting	22	30	5.38E-5	5.35E-5				
Cereal grains	Crop		2.5 lb ai/A				2.5 lb ai/A			
	Corn (unspecified), Corn, field, Corn, Pop Corn, Sweet, Sorghum, grain	Irrigation, Scouting	0				3.83E-5			

in the preliminary risk assessment was too long. The Almond Hullers also asked for guidance on what activities would be restricted by the REI.

Response: EPA has revised the post-application risk assessment using new transfer coefficients derived from the Agricultural Reentry Task Force (ARTF). These new transfer coefficients can be found in the Science Advisory Council for Exposure, Policy number 3.1 dated August 7, 2000. The propargite RED uses the standard values found in this new policy unless a chemical/crop specific study is available, as was the case for tree shakers for nut crops (MRID 418486-04). As a result of using the new transfer coefficients, the REI for almonds (at maximum use rate of 3lbs ai/A) is now 22 days. Many of the other activities of concern to almond growers can be accommodated with existing exemptions under the Worker Protection Standard. Scouting is a handler activity under the WPS, so anyone performing this activity may legally enter the treated field during the REI provided they use the handler personal protective equipment (PPE) specified on the label. In addition, if the scout is a certified crop advisor as defined in the WPS (40CFR170.112(e)), the individual can determine the appropriate PPE to be used. For many of these crops, irrigation equipment is not routinely moved by hand. For these methods, the primary activity involves entering the field to turn the watering equipment on and off. This activity is allowed during the REI under the no contact exception to WPS (40CFR170.112(b)). Should irrigation equipment need unexpected repairs during the REI, WPS allows workers to enter a treated field provided early entry PPE is used (40CFR170.112(c)). This exception also applies to mechanical harvesting, tree shaking or winrowing for nut crops in enclosed cabs, and often applies to mowing.

Comment: The NAAA was concerned that EPA's occupational risk assessment for propargite is based on out-of-date data that are not reflective of current practices. Their comments specifically mentioned that technological advances such as use of Global Positioning Satellite (GPS) and automatic flagging systems have replaced human flagging; and mixers/loaders for aerial applicators routinely use personal protective equipment and engineering controls, such as closed mixing loading systems, body suits, respirators and other equipment.

Response: The risk mitigation measures outlined in this RED are consistent with the standard practices that are currently followed in the industry, as described by the NAAA comments on propargite. Based on the risk assessment, there will be no new requirements for human flaggers; closed mixing/loading systems will be required for aerial applications of propargite for corn and cotton; and enclosed cockpits will be required. With these risk mitigation measures in place, EPA believes that risks will not be unreasonable.

Other Comments: Subsequent to the comment period for the propargite preliminary risk assessment, EPA also received a series of letters and e-mails attesting to the benefits of propargite. Comments were received from: the Allied Grape Growers; California Association of Wine Grape Growers; California Grape and Tree Fruit League; Allied Grape Growers; Washington Association of Wine Grape Growers; Sun-Maid Growers of California on the benefits of propargite use for raisin production; University of California Cooperative Extension regarding alfalfa seed production; the Northwest Alfalfa Seed Growers Association; the Oregon Alfalfa Seed Commission; University of

Commodity	Established Tolerance, ppm	Reassessed Tolerance, ppm	Comments [Correct Commodity Definition]
Cattle, fat	0.1	0.10	Supported by data.
Cattle, meat	0.1	0.10	Supported by data.
Citrus pulp, dried	40	Revoke	Residues do not concentrate. Will be covered by RAC.
Corn, fodder	10	10	corn, field, stover. Field trial data support current tolerance.
Corn, forage	10	10	corn, field, forage. Field trial data support current tolerance.
Corn, grain	0.1	0.10	corn, field, grain. Field trial data support current tolerance.
Cottonseed	0.1	0.10	[cotton seed, undelinted]. Field trial data support current tolerance.
Cranberry	10	Already Revoked	revoked 64 FR 39068; July 21, 1999. No longer registered.
Eggs	0.1	0.10	Field trial data support current tolerance.
Figs	3	Already Revoked	revoked 64 FR 39068; July 21, 1999. No longer registered.
Figs, dried	9	Already Revoked	revoked 64 FR 39068; July 21, 1999. No longer registered.
Goats, fat	0.1	0.10	Supported by data.
Goat, meat	0.1	0.10	Supported by data.
Grapefruit	5	5.0	Field trial data support current tolerance.
Grape	10	10	Field trial data support current tolerance.
Hog, fat	0.1	0.10	Supported by data.
Hog, meat	0.1	0.10	Supported by data.
Hops	15	Revoke	The RAC for hops is dried hops.
Hops, dried	30	30	Field trial data support current tolerance.
Horse, fat	0.1	0.10	Supported by data.
Horse, meat	0.1	0.10	Supported by data.
Lemon	5	5.0	Field trial data support current tolerance.
Milk, fat	2	2.0	Supported by data.
Milk	0.08	0.08	Supported by data.
Mint	50	50	Field trial data support current tolerance.
Nectarine	4	4.0	Field trial data support current tolerance.
Orange	5	10	The available data indicate that a tolerance increase is required, given the current use pattern.
Peach	7	Already Revoked	revoked 64 FR 39068; July 21, 1999. No longer registered.
Peanut	0.1	0.10	Field trial data support current tolerance.

Commodity	Established Tolerance, ppm	Reassessed Tolerance, ppm	Comments [Correct Commodity Definition]
Peanut, forage	10	Revoke	Peanut forage is not recognized as a significant livestock feed item.
Peanut, hay	10	Revoke	Labels prohibit the feeding of hay.
Peanuts, hulls	10	Already Revoked	revoked 62 FR 66020; November 14, 1997. No longer considered a significant feed item. NOTE: This tolerance still appears in CFR even though it was revoked.
Pear	3	Already Revoked	revoked 64 FR 39068; July 21, 1999. No longer registered.
Plum (fresh prune)	7	Already Revoked	revoked 64 FR 39068; July 21, 1999. No longer registered.
Poultry, fat	0.1	0.10	Supported by data.
Poultry, meat	0.1	Revoke	propargite was absent from muscle and liver in the metabolism study and <LOQ in a 10x feeding study. Therefore, no reasonable expectation of finite residues and tolerance is not needed.
Potato	0.1	0.10	Field trial data support current tolerance.
Sheep, fat	0.1	0.10	Supported by data.
Sheep, meat	0.1	0.10	Supported by data.
Sorghum, fodder	10	10	sorghum, grain, stover. Field trial data support current tolerance.
Sorghum, forage	10	10	sorghum, grain, forage. Field trial data support current tolerance.
Sorghum, grain	10	5.0	The available data support lowering the tolerance. Sorghum, grain.
Strawberry	7	Already Revoked	revoked 64 FR 39068; July 21, 1999. No longer registered.
Tea, dried	10	10	Field trial data support current tolerance.
Walnut	0.1	0.10	Field trial data support current tolerance.
Tolerances Listed Under 40 CFR §180.259(b)			
Corn, fresh (including sweet K+CWHR)	0.1	0.10	Field trial data support current tolerance.
Tolerances Listed Under 40 CFR §186.5000			
Apple pomace, dried	80	Already Revoked	revoked 62 FR 66020; November 14, 1997. No longer considered a significant feed item.
Grape pomace, dried	40	Already Revoked	revoked 62 FR 66020; November 14, 1997. No longer considered a significant feed item.

Table 13. Restricted Entry Intervals (REIs) for Propargite

Crop	PHI (days)	REI (days)	Exceptions	Comments
Alfalfa (grown for seed)	NS	9	None	REI set on 2.5 lb ai/A rate where irrigation/scouting MOE \geq 100. There are no data on harvesting exposures. However, harvesters are expected to be protected with REI set on irrigation/ scouting exposure data.
Almond	28	22	None	REI set on 3 lb ai/A rate where pruning MOE \geq 100. This REI is also expected to protect sweeping and blowing of the nuts. Tree shaking (and other activities done in enclosed cabs) and irrigation would allowed before REI expires under the WPS “no contact” exemption.
Avocado (non-bearing)	NA ¹	11	None	REI set on 4.5 lb ai/A rate where pruning MOE \geq 100.
Beans, dry	14	9	None	REI set on 2.5 lb ai/A rate where irrigation/scouting MOE \geq 100. Harvesters are protected by PHI.
Boysenberry (non-bearing)	NA ¹	10	None	REI set on 2 lb ai/A rate where pruning and tying MOE \geq 100.
Carrot (grown for seed)	NS	2 ²	Hand harvesting prohibited for 13 days	REI set on 2.5 lb ai/A rate where all activities except hand harvesting have MOE \geq 100. Hand harvesting prohibited for 13 days
Cherry (foliar application after harvest)	NA ¹	2 ²	None	REI set on 1.5 lb ai/A rate where pruning MOE \geq 100. Since this is a foliar application after harvest, there are no harvesters to protect.
Christmas Tree, Ornamental and/or shade trees, Ornamental Herbaceous Plants	NS	14	None	REI set on 2.5 lb ai/A rate where harvesting MOE \geq 100.
Clover (grown for seed)	NS	9	None	REI set on 2.5 lb ai/A rate where irrigation/scouting MOE \geq 100. There are no data on harvesting exposures. However, harvesters are expected to be protected with REI set on irrigation/ scouting exposure data.
Corn (field, pop, sweet)	30	13	None	REI set on 2.5 lb ai/A rate where hand harvesting and detasseling MOE \geq 100.
Cotton	50	6	None	REI set on 1.5 lb ai/A rate where harvesting MOE \geq 100.
Currant (non-bearing)	NA ¹	10	None	REI set on 2 lb ai/A rate where harvesting, pruning and tying MOE \geq 100.
Date (non-bearing)	NA ¹	2 ²	None	REI set on 1.5 lb ai/A rate where pruning MOE \geq 100.

Crop	PHI (days)	REI (days)	Exceptions	Comments
Grapefruit	7-21	20	None	REI set on 3.15 lb ai/A rate where harvesting MOE \geq 100.
Grapes	21	27 days for grapes (table) turning cane. 16 days for all other grapes.	None	REI set on 3 lb ai/A rate where cane turning for table grapes MOE \geq 100. REI set on 3 lb ai/A rate where harvesting, pruning, tying MOE \geq 100.
Hazel nut (non-bearing)	NA ¹	22	None	REI set on 3 lb ai/A rate where pruning MOE \geq 100.
Hops	14	21	Special Local Needs (SLN) registrations over 1.9 lbs ai/A are 30 days	REI set on 1.5 lb ai/A rate on FIFRA§3 labels where harvesting and training MOE \geq 100. REI for SLN set on 2.5 lb ai/A rate where harvesting and training MOE \geq 100.
Jojoba	NS	2 ²	None	REI set on 1.5 lb ai/A rate.
Lemon	7	20	None	REI set on 3.15 lb ai/A rate where harvesting MOE \geq 100. Exception for pruning is set where MOE \geq 100.
Lime (non-bearing)	NA ¹	16	20 days for pruning.	REI set on 2.5 lb ai/A rate where pruning MOE \geq 100. Exception for pruning is set where MOE \geq 100.
Macadamia Nut (non-bearing)	NA ¹	22	None	REI set on 3 lb ai/A rate where pruning MOE \geq 100.
Mint	14	7	None	REI set on 2.25 lb ai/A rate.
Nectarine	14	5	None	REI set on 2.5 lb ai/A rate where pruning MOE \geq 100. Harvesters are protected by the PHI.
Orange	7-21	20	None	REI set on 3.15 lb ai/A rate where harvesting MOE \geq 100.
Peanuts	14	2 ²	None	REI set on 1.5 lb ai/A rate.
Pecan (non-bearing)	NA ¹	22	None	REI set on 3 lb ai/A rate at days where pruning MOE \geq 100.
Persimmon (non-bearing)	NA ¹	2 ²	None	REI set on 1.5 lb ai/A rate where pruning MOE \geq 100.
Pistachio (non-bearing)	NA ¹	22	None	REI set on 3 lb ai/A rate where pruning MOE \geq 100.
Potato	14	2 ²	None	REI set on 2.5 lb ai/A rate where all activities except hand harvesting have MOE \geq 100. Harvesters are protected by the PHI.

Crop	Propargite		Alternatives (Mkt Share)	Notes	Estimated yield loss ¹
	% crop treated	mkt share			
Cotton	1.6%	7%	abamectin (60%) amitraz bifenthrin (1%) dicofol (32%) hexathiazox sulfur	CA, AZ, TN Abamectin and dicofol are the primary alternatives.	2%
Grapes, raisin	54%	86%	cinnamaldehyde (1%) dicofol (2%) fenbutatin oxide (5%) sulfur (6%)	CA Fenbutatin oxide and dicofol, the primary alternatives, are equally effective but more expensive.	1%
Grapes, table	20%	27%	dicofol (32%) fenbutatin oxide (41%)	CA	1%
grapes, wine	11%	71%	abamectin (<1%) cinnamaldehyde (1%) dicofol (8) fenbutatin oxide (3) sulfur (18%)	CA	1%
Hops	5%	100%	dicofol oxythioquinox sulfur	Mites in WA are resistant to dicofol	59%
Mint	22%		dicofol oxydemeton-methyl	ID. OR, WA propargite is the only effective acaricide in OR	41%
Nectarines	22%	25%	clofentezine (15%) dicofol (20%) formetanate Hcl (20%) fenbutatin oxide (10%) sulfur (10%)	CA Fenbutatin oxide is the most likely alternative	10%
peanut	0.7%	100%	none	AL, GA, NC, FL, VA	6%
Potato	2%	100%	insecticidal soap sulfur	WA Alternatives are ineffective	20%
Walnut	25%	78%	abamectin (2%) clofentezine (5%) dicofol (5%) fenbutatin oxide (10%) narrow range oil oxythioquinox	CA	8%

1/ Based on USDA NAPIAP Propargite report (Osteen, 1994), Table 1 and pages 177-185. In some cases, per acre dollar losses compared to 1993 gross revenues from Agricultural Statistics 1995-96, table 543 to derive

Until EPA decides upon, and publishes the final label guidance for spray, and dust drift, the registrant for propargite has agreed to add the following spray drift related language, in part to address concerns of surface water runoff of propargite.

Do not allow this product to drift off target site.

Do not apply by ground within 50 ft. or by air within 75 ft. of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds.

For ground applications apply the coarsest droplet size spectrum that provides sufficient coverage and mite control. Use the lowest nozzle height that provides uniform coverage. Apply only when wind speeds are 10 mph or less when measured by an anemometer outside the spray area on the upwind side.

For aerial applications apply the coarsest droplet size spectrum that provides sufficient coverage and mite control. Apply from the lowest possible height that provides good pest control and flight safety. Use the shortest boom length that is practical. Apply only when wind speeds are 10 mph or less when measured by an anemometer outside the spray area on the upwind side.

Risk of exposure to sensitive aquatic areas can be reduced by making applications when the wind direction is away from the aquatic area.

Do not make aerial or ground applications during temperature inversions.

Required Labeling Changes Summary Table

Table 15 Summary of Required Labeling Changes for Propargite		
Description	Required Labeling	Placement on Label
Manufacturing Use Products		
One of these statements may be added to a label to allow reformulation of the product for a specific use or all additional uses supported by a formulator or user group	<p>“Only for formulation into an miticide for the following use(s): alfalfa grown for seed; almond; apples (non-bearing); apricots (non-bearing); avocado (non-bearing); bean, dry (including dry lima beans); berries (non-bearing); boysenberry (non-bearing); carrot (grown for seed); cherry (foliar after harvest); Christmas tree, ornamental and/or shade, ornamental herbaceous plants; clover grown for seed; corn (field, pop, sweet); cotton; currant (non-bearing); dates (non-bearing); figs (non-bearing); grapefruit; grapes; hazel nut (non-bearing); hops; jojoba; lemon; lime (non-bearing); macadamia nut (non-bearing); mint (field grown); nectarine; orange; peaches (non-bearing); pears (non-bearing); peanuts; pecan (non-bearing); persimmon (non-bearing); pistachio (non-bearing); plums (non-beaing); potato; pruns (non-bearing); quince (non-bearing); raspberry (non-bearing); roses(field grown); strawberries (non-bearing); sorghum; sugar beets (grown for seed); tangerines (non-bearing); and walnuts.</p>	Directions for Use
	<p>“This product may be used to formulate products for specific use(s) not listed on the MP label if the formulator, user group, or grower has complied with U.S. EPA submission requirements regarding support of such use(s).”</p> <p>“This product may be used to formulate products for any additional use(s) not listed on the MP label if the formulator, user group, or grower has complied with U.S. EPA submission requirements regarding support of such use(s).”</p>	Directions for Use
Environmental Hazards Statements Required by the RED and Agency Label Policies	<p>This pesticide is toxic to fish. Do not discharge effluent into lakes, streams, ponds, estuaries, oceans, or public waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.</p>	Directions for Use

Description	Required Labeling	Placement on Label
End Use Products Intended for Occupational Use (WPS)		
Restricted Use Pesticide Requirement (all formulations)	Restricted Use Pesticide “Due to acute skin and eye effect. For retail sale to and use only by Certified Applicators, or persons under their supervision, and only for those uses covered by the Certified Applicator’s certification.”	
PPE Requirements Established by the RED ¹ for liquid products	“Personal Protective Equipment (PPE) Some materials that are chemical-resistant to this product are” (<i>registrant inserts correct chemical-resistant material</i>). “If you want more options, follow the instructions for category [<i>registrant inserts A,B,C,D,E,F,G,or H</i>] on an EPA chemical-resistance category selection chart.” “Mixers, loaders, applicators and other handlers must wear: Long-sleeved shirt and long pants Shoes plus socks Chemical-resistant gloves (except for flaggers and applicators using closed cabs) Chemical-resistant apron for mixers and loaders and persons exposed to the concentrate See engineering controls for additional requirements”	Immediately following/below Precautionary Statements: Hazards to Humans and Domestic Animals

Description	Required Labeling	Placement on Label
<p>PPE Requirements Established by the RED¹ for Wettable Powder product formulations must be packaged in Water Soluble Packaging (WSP) to be eligible for reregistration.</p>	<p>“Personal Protective Equipment (PPE)</p> <p>Some materials that are chemical-resistant to this product are” (<i>registrant inserts correct chemical-resistant material</i>). “If you want more options, follow the instructions for category [<i>registrant inserts A,B,C,D,E,F,G,or H</i>] on an EPA chemical-resistance category selection chart.”</p> <p>Mixers, loaders, applicators and other handlers must wear:</p> <p>Long-sleeved shirt and long pants Shoes plus socks Chemical-resistant gloves (except for flaggers and applicators using closed cabs) Chemical-resistant apron for mixers and loaders.</p> <p>See engineering controls for additional requirements”</p>	<p>Immediately following/below Precautionary Statements: Hazards to Humans and Domestic Animals</p>
<p>User Safety Requirements</p>	<p>“Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.”</p>	<p>Precautionary Statements: Hazards to Humans and Domestic Animals immediately following the PPE requirements</p>

Description	Required Labeling	Placement on Label
<p>Engineering Controls Established by the RED¹ for liquid products</p>	<p>“Engineering Controls</p> <p>“Mixers and loaders supporting aerial applications to corn and cotton must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], and must:</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for mixers/loaders, -- wear protective eyewear if the system operates under pressure, and -- be provided and have immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown: coveralls, and chemical-resistant footwear .” <p>"Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)];</p> <p>“Applicators using airblast spray equipment must use an enclosed cab that meets the definition in the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, such applicators must:</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for applicators, -- be provided and must have immediately available for use in an emergency when they must exit the cab in the treated area: coveralls, chemical resistant gloves, chemical-resistant footwear, and chemical-resistant headgear, if overhead exposure, -- take off any PPE that was worn in the treated area before reentering the cab, and -- store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.” <p>“When other applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.”</p>	<p>Precautionary Statements: Hazards to Humans and Domestic Animals (Immediately following PPE and User Safety Requirements.)</p>

Description	Required Labeling	Placement on Label
<p>Engineering Controls Established by the RED¹ for Wettable Powders in Water Soluble Packaging. All WP product must be packaged in Water Soluble Packaging (WSP) to be eligible for reregistration.</p>	<p>“Engineering Controls</p> <p>Water-soluble packets when used correctly qualify as a closed mixing/loading system under the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water-soluble packets must :</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for mixers/ loaders, and -- be provided and must have it immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown: coveralls, chemical-resistant footwear, and a NIOSH approved respirator with an organic vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or an organic vapor cartridge or canister with any N, R, P or HE prefilter, and <p>-Chemical-resistant headgear, if overhead exposure.”</p> <p>"Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)];</p> <p>“Applicators using airblast spray equipment must use an enclosed cab that meets the definition in the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, such applicators must:</p> <ul style="list-style-type: none"> -- wear the personal protective equipment required above for applicators, -- be provided and must have immediately available for use in an emergency when they must exit the cab in the treated area: coveralls, chemical resistant gloves, chemical-resistant footwear, and chemical-resistant headgear, if overhead exposure, -- take off any PPE that was worn in the treated area before reentering the cab, and -- store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.” <p>“When other applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.”</p> 	<p>Precautionary Statements: Hazards to Humans and Domestic Animals (Immediately following PPE and User Safety Requirements.)</p>

Description	Required Labeling	Placement on Label
User Safety Recommendations	<p>“User Safety Recommendations</p> <p>Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.</p> <p>Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.</p> <p>Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.”</p>	<p>Precautionary Statements under: Hazards to Humans and Domestic Animals immediately following Engineering Controls</p> <p>(Must be placed in a box.)</p>
Environmental Hazards	<p>“This product is toxic to aquatic invertebrates and wildlife. Do not apply directly to water, or areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply by ground application equipment within 50 feet of surface waters or by aerial application equipment within 75 feet of surface water. See Directions for Use for additional restrictions. Do not contaminate water when disposing of equipment wash water.”</p>	<p>Precautionary Statements immediately following the User Safety Recommendations</p>
Restricted-Entry Interval	<p>In the Agricultural Use Requirements box, place the following statements:</p> <p>“Do not enter or allow workers to enter during the restricted-entry interval (REI), except as provided for by the WPS. The REI and Exceptions are listed in the Directions for Use associated with the crop.”</p> <p>“Notify workers of the exception (including when entry is permitted for each of the tasks named in the exception).”</p>	<p>Directions for Use, Agricultural Use Requirements Box and Application Instructions for Appropriate Crop</p>

Description	Required Labeling	Placement on Label
	<p>In the Directions for Use under Application Instructions for each crop, specify the following REIs:</p> <p>Carrots, cherries, dates, jojoba, peanuts, persimmon, potatoes, quince, sorghum, and sugar beets. enter crop or crop group): The REI is 48 hours.</p> <p>Nectarine: The REI is five days.</p> <p>Cotton: The REI is six days.</p> <p>Alfalfa, beans (dry), clover, mint: The REI is nine days.</p> <p>Mint: The REI is seven days.</p> <p>Berry Crops: The REI is ten days,</p> <p>Avocado, The REI is eleven days,</p> <p>Corn (field, pop and sweet): The REI is thirteen days,</p> <p>Christmas Tree, ornmental and shade trees, ornamental herbaceous plants: The REI is fourteen days.</p>	

Description	Required Labeling	Placement on Label
	<p>Lime: The REI is sixteen days,</p> <p>Hops: The REI is twenty-one days,</p> <p>Almonds, hazel nut, macadamia, pecan, pistachio: The REI is twenty-two days,</p> <p>Grapes (except table): The REI is sixteen days,</p> <p>Table Grapes: The REI is twenty-seven days,</p> <p>Walnuts: The REI is thirty days. <u>Exception</u>: In addition to the early entry exceptions allowed by the Worker Protection Standard, you may enter or allow workers to enter treated areas to perform tree shaking tasks twenty one days following application as long as the worker wears long pants, long sleeved shirt and shoes plus socks.”</p> <p>Citrus: The REI is twenty days.</p>	
<p>Early Re-entry Personal Protective Equipment established by the RED.</p>	<p>“ PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:</p> <ul style="list-style-type: none"> -- coveralls over long-sleeved shirt and long pants, -- chemical-resistant gloves made of any waterproof material, -- chemical-resistant footwear plus socks, and -- protective eyewear.” <p>“Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.”</p>	<p>Directions for Use, Agricultural Use Requirements Box</p>
<p>Notification Statement</p>	<p>“Notify workers of the application by warning them orally and by posting warning signs at entrances to treated area.”</p>	<p>Directions for Use, Agricultural Use Requirements Box</p>

Description	Required Labeling	Placement on Label																						
General Application Restrictions	Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application."	Place in the Direction for Use directly above the Agricultural Use Box.																						
Other Application Restrictions	<p>The following risk mitigation measures must be reflected in the directions for use:</p> <p>New Annual Application Rates Restrictions:</p> <table border="1" data-bbox="611 589 1593 1122"> <thead> <tr> <th data-bbox="632 613 1045 716">Crop</th> <th data-bbox="1066 613 1572 716">Annual Application Rate (lbs.a.i./Acre)</th> </tr> </thead> <tbody> <tr> <td data-bbox="632 716 1045 760">Beans (6 /bs/gal EC)</td> <td data-bbox="1066 716 1572 760">4.5</td> </tr> <tr> <td data-bbox="632 760 1045 803">Beans (6.55 /bs/gal EC)</td> <td data-bbox="1066 760 1572 803">3.7</td> </tr> <tr> <td data-bbox="632 803 1045 847">Citrus (Liquid EC)</td> <td data-bbox="1066 803 1572 847">4.1</td> </tr> <tr> <td data-bbox="632 847 1045 891">Cotton</td> <td data-bbox="1066 847 1572 891">3.3</td> </tr> <tr> <td data-bbox="632 891 1045 935">Field corn/Popcorn</td> <td data-bbox="1066 891 1572 935">1.5</td> </tr> <tr> <td data-bbox="632 935 1045 979">Jojoba</td> <td data-bbox="1066 935 1572 979">1.6</td> </tr> <tr> <td data-bbox="632 979 1045 1023">Mint</td> <td data-bbox="1066 979 1572 1023">4.5</td> </tr> <tr> <td data-bbox="632 1023 1045 1066">Oranges/Grapefruit/Lemons (WP)</td> <td data-bbox="1066 1023 1572 1066">5.8</td> </tr> <tr> <td data-bbox="632 1066 1045 1110">Walnuts (6 /bs/gal EC)</td> <td data-bbox="1066 1066 1572 1110">6.8</td> </tr> <tr> <td data-bbox="632 1110 1045 1154">Walnuts (32% WP(WSP))</td> <td data-bbox="1066 1110 1572 1154">6.4</td> </tr> </tbody> </table>	Crop	Annual Application Rate (lbs.a.i./Acre)	Beans (6 /bs/gal EC)	4.5	Beans (6.55 /bs/gal EC)	3.7	Citrus (Liquid EC)	4.1	Cotton	3.3	Field corn/Popcorn	1.5	Jojoba	1.6	Mint	4.5	Oranges/Grapefruit/Lemons (WP)	5.8	Walnuts (6 /bs/gal EC)	6.8	Walnuts (32% WP(WSP))	6.4	Directions for Use
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Description	Required Labeling	Placement on Label																								
Other Application Restrictions (continued)	<p>The following risk mitigation measures must be reflected in the directions for use:</p> <p>New Spray Intervals Required for Propargite:</p> <table border="1" data-bbox="594 418 1604 1268"> <thead> <tr> <th data-bbox="615 435 1102 574">Crop</th> <th data-bbox="1102 435 1331 574">Minimum Spray Interval (Days)</th> <th data-bbox="1331 435 1583 574">Total Number of Sprays per year</th> </tr> </thead> <tbody> <tr> <td data-bbox="615 574 1102 751">Almonds; beans (dry); cotton; grapes; hops; nectarines; potatoes (excluding Washington); walnuts; non-bearing crops</td> <td data-bbox="1102 574 1331 751">21</td> <td data-bbox="1331 574 1583 751">2</td> </tr> <tr> <td data-bbox="615 751 1102 813">Jojoba</td> <td data-bbox="1102 751 1331 813">21</td> <td data-bbox="1331 751 1583 813"></td> </tr> <tr> <td data-bbox="615 813 1102 875">Citrus (orange, grapefruit, lemons)</td> <td data-bbox="1102 813 1331 875">28</td> <td data-bbox="1331 813 1583 875">1</td> </tr> <tr> <td data-bbox="615 875 1102 1092">Ornamentals, Christmas Trees and Conifers</td> <td data-bbox="1102 875 1331 1092">28 (west of Rocky Mts.) 7 (east of Rocky Mts.)</td> <td data-bbox="1331 875 1583 1092">2 3</td> </tr> <tr> <td data-bbox="615 1092 1102 1154">Roses, other ornamentals</td> <td data-bbox="1102 1092 1331 1154">14</td> <td data-bbox="1331 1092 1583 1154"></td> </tr> <tr> <td data-bbox="615 1154 1102 1216">Potato (Washington); peanuts; mint</td> <td data-bbox="1102 1154 1331 1216">14</td> <td data-bbox="1331 1154 1583 1216">3</td> </tr> <tr> <td data-bbox="615 1216 1102 1268"></td> <td data-bbox="1102 1216 1331 1268"></td> <td data-bbox="1331 1216 1583 1268">2</td> </tr> </tbody> </table>	Crop	Minimum Spray Interval (Days)	Total Number of Sprays per year	Almonds; beans (dry); cotton; grapes; hops; nectarines; potatoes (excluding Washington); walnuts; non-bearing crops	21	2	Jojoba	21		Citrus (orange, grapefruit, lemons)	28	1	Ornamentals, Christmas Trees and Conifers	28 (west of Rocky Mts.) 7 (east of Rocky Mts.)	2 3	Roses, other ornamentals	14		Potato (Washington); peanuts; mint	14	3			2	
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Description	Required Labeling	Placement on Label
Spray Drift Restrictions	<p>The following spray drift statement is required.</p> <p>Do not apply by ground within 50 ft. or by air within 75 ft. of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds.</p> <p>The following statements or equivalent statements required by the proposed spray drift PR Notice are required:</p> <p style="padding-left: 40px;">Do not allow this product to drift off target site.</p> <p style="padding-left: 40px;">Do not apply by ground within 50 ft. or by air within 75 ft. of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds.</p> <p style="padding-left: 40px;">For ground applications apply the coarsest droplet size spectrum that provides sufficient coverage and mite control. Use the lowest nozzle height that provides uniform coverage. Apply only when wind speeds are 10 mph or less when measured by an anemometer outside the spray area on the upwind side.</p> <p style="padding-left: 40px;">For aerial applications apply the coarsest droplet size spectrum that provides sufficient coverage and mite control. Apply from the lowest possible height that provides good pest control and flight safety. Use the shortest boom length that is practical. Apply only when wind speeds are 10 mph or less when measured by an anemometer outside the orchard/vineyard on the upwind side.</p> <p style="padding-left: 40px;">Risk of exposure to sensitive aquatic areas can be reduced by making applications when the wind direction is away from the aquatic area.</p> <p style="padding-left: 40px;">Do not make aerial or ground applications during temperature inversions.</p>	

Description	Required Labeling	Placement on Label
Runoff Restrictions	<p>Under some conditions, propargite may have a high potential for runoff into surface water for several days after application. Do not apply in the following areas:</p> <ul style="list-style-type: none"> -- frequently flooded areas (excluding artificially flooded areas). -- areas where intense or sustained rainfall is forecasted to occur within 48 hours. <p>Use best management practices for minimizing surface runoff in the following areas:</p> <ul style="list-style-type: none"> -- poorly draining or wet soils with readily visible slopes toward adjacent surface water. -- areas with in-field canals or ditches that drain to surface water. -- areas not separated from adjacent surface waters with vegetated filter 	

¹PPE that is established on the basis of Acute Toxicity of the end-use product must be compared to the active ingredient PPE in this document. The more protective PPE must be placed in the product labeling. For guidance on which PPE is considered more protective, see PR Notice 93-7.

Instructions in the Labeling Required section appearing in quotations represent the exact language that must appear on the label.

Instructions in the Labeling Required section not in quotes represent actions that the registrant must take to amend their labels or product registrations.

Appendix A: Propargite Use Patterns Eligible for Reregistration

Site	Application Type	Application Timing	Application Equipment	Formulation	Maximum Single Application Rate, ai	Maximum Number of Applications Per Season	Maximum Seasonal Rate, ai	Minimum Spray Interval (days)	Preharvest Interval, (days)	Reentry Interval (days)	Use Directions and Limitations ¹
Food/Feed Crop Uses											
Almond											
	Broadcast foliar			32% WP (WSP)	3.2 lb/A	2	Not specified (NS)	21	28	22 days	Use limited to AZ and CA. Applications may be made in a minimum of 50 gal of finished spray/A by ground. The grazing or feeding livestock on cover crops grown among trees is prohibited.
	Ground										
	Broadcast foliar			6 lb/gal EC	3 lb/A	2	NS	21	28	22 days	Use limited to AZ and CA. Applications may be made in a minimum of 50 gal of finished spray/A by ground and 15 gal of finished spray/A by air. The grazing or feeding livestock on cover crops grown among the trees is prohibited.
	Ground and aerial										
Bean, dry (including dry lima beans)											
	Broadcast foliar			6.55 lb/gal EC	2.46 lb/A	2	3.7 lbs. ai/A	21	14	9 days	Use limited to regions west of the Rocky Mountains. Applications may be made in a minimum of 20 gal of finished spray/A by ground and 5 gal of finished spray/A by air.
	Ground and aerial			6 lb/gal EC	2.53 lb/A	2	4.5 lbs. ai/A	21	14	9 days	
Bean (interplanted with nonbearing almonds and walnuts)											
	Broadcast foliar			6.55 lb/gal EC [SLN]	2.46 lb/A	2	3.37 lbs. ai/A	21	14	9 days	Use limited to CA. Applications may be made in a minimum of 20 gal of water/A by ground and 5 gal of water/A by air.
	Ground and aerial										

Site Application Type Application Timing Application Equipment	Formulation	Maximum Single Application Rate, ai	Maximum Number of Applications Per Season	Maximum Seasonal Rate, ai	Minimum Spray Interval (days)	Preharvest Interval, (days)	Reentry Interval (days)	Use Directions and Limitations ¹
Cherry								
Foliar application after fruit harvest Ground	32% WP (WSP)	1.92 lb/A	NS	NS	21	Not applicable (NA)	2 days	Use limited to regions west of the Rocky Mountains. Applications may be made in a minimum of 400 gal of finished spray/A by ground. The grazing or feeding livestock on cover crops grown among the tree and vines is prohibited.
Corn (unspecified)								
Broadcast foliar Ground and aerial	6 lb/gal EC [SLN]	1.69 lb/A	2	NS	NS	30	13 days	Use limited to KS. Split applications may be made in a minimum of 20 gal of water/A by ground and 5 gal of water/A by air with a 3-4 week retreatment interval. The grazing or feeding of livestock on treated areas is prohibited.
Directed band spray Ground Early plant	6 lb/gal EC [SLN]	1.13 lb/A (directed spray) followed by: 1.69 lb/A (broadcast spray)	2	2.53 lb/A	NS	30	13 days	Use limited to NM. Split applications may be made in 10 gal of finished spray/A by ground during early season followed by an aerial application in a minimum of 5 gal of water/A during mid or late season. The grazing or feeding of livestock on treated areas is prohibited.
followed by: Broadcast foliar Aerial	6 lb/gal EC [SLN]	0.84 lb/A (directed spray) followed by: 1.69 lb/A (broadcast spray)	2	2.53 lb/A	NS	30	13 days	Use limited to TX. Split applications may be made in 10 gal of finished spray/A by ground during early season followed by an aerial application in a minimum of 5 gal of water/A during mid or late season. The grazing or cutting for silage within 30 days after treatment is prohibited.
Chemigation Overhead irrigation	6 lb/gal EC [SLN]	2.53 lb/A	1	NS	NS	30	13 days	Use limited to TX. The grazing or cutting for silage of treated corn within 30 days is prohibited.

Site	Application Type	Formulation	Maximum Single Application Rate, ai	Maximum Number of Applications Per Season	Maximum Seasonal Rate, ai	Minimum Spray Interval (days)	Preharvest Interval, (days)	Reentry Interval (days)	Use Directions and Limitations ¹
Corn, field									
	Broadcast foliar Ground and aerial	6 lb/gal EC	1.5 lb/A	1	NS	NS	56	13 days	Use limited to CA. Applications may be made in 20-50 gal of finished spray/A by ground and in a minimum of 10 gal of finished spray/A by air.
	Broadcast foliar Ground and aerial	6.55 lb/gal EC	2.46 lb/A	1	NS	NS	30	13 days	Applications may be made in a minimum of 20 gal of finished spray/A by ground and in KS and CO applications may be made in a minimum of 2 gal of finished 6 lb/gal EC 2.53 lb/A1NSNS3013 daysApplications may be made in a minimum of 20 gal of finished spray/A by ground and in KS and CO applications may be made in a minimum of 2 gal of finished spray/A by air and in TX and NM and other states, applications may be made in a minimum of 5 gal of finished spray/A by air.
		6.55 lb/gal EC [SLN]	2.46 lb/A	1	NS	NS	30	13 days	Use limited to CA. Applications may be made in a minimum of 20 gal of finished spray/A by ground or 10 gal of finished spray/A by air. The grazing or feeding of livestock on treated areas is prohibited.
Corn, pop									
	Broadcast foliar	6.55 lb/gal EC	2.46 lb/A	1	NS	NS	30	13 days	See "Corn, field".
	Ground and aerial	6 lb/gal EC	2.53 lb/A	1	NS	NS	30	13 days	See "Corn, field".

Site	Application Type	Application Timing	Application Equipment	Formulation	Maximum Single Application Rate, ai	Maximum Number of Applications Per Season	Maximum Seasonal Rate, ai	Minimum Spray Interval (days)	Preharvest Interval, (days)	Reentry Interval (days)	Use Directions and Limitations ¹
Corn, sweet											
	Broadcast foliar			6.55 lb/gal EC	2.46 lb/A	1	NS	NS	30	13 days	Use limited to CA. Applications may be made in a minimum of 20 gal of finished spray/A by ground and in 2 gal of finished spray/A by air.
	Ground and aerial										
	Broadcast foliar or chemigation			6.55 lb/gal EC [SLN]	2.46 lb/A	1	NS	NS	30	13 days	Use limited to AZ, ID, OR, and WA. Applications may be made in a minimum of 20 gal of water/A by ground and in 10 gal of water/A by air.
	Ground, aerial, and overhead irrigation										
	Broadcast foliar			6 lb/gal EC [SLN]	1.69 lb/A	2	NS	NS	30	13 days	Use limited to CO. Split applications may be made in a minimum of 20 gal of water/A by ground and 5 gal of water/A by air with a 3-4 week retreatment interval. The grazing or cutting for silage of treated corn within 30 days is prohibited.
	Ground and aerial										
	Broadcast foliar			6 lb/gal EC [SLN]	1.69 lb/A	NS	NS	NS	30	13 days	Use limited to CO. Applications may be made in a minimum of 5 gal of water/A by air. The grazing or feeding livestock on treated areas is prohibited.
	Aerial										

Site Application Type Application Timing Application Equipment	Formulation	Maximum Single Application Rate, ai	Maximum Number of Applications Per Season	Maximum Seasonal Rate, ai	Minimum Spray Interval (days)	Preharvest Interval, (days)	Reentry Interval (days)	Use Directions and Limitations ¹
Cotton								
Broadcast foliar Ground and aerial	6.55 lb/gal EC	0.8-1.64 lb/A	2	3.3 lbs ai/A	21	50	6 days	Use limited to regions east of the Rocky Mountains. Use of the 6.55 lb/gal EC formulation also limited to AZ and CA. Applications may be made early season, midseason, and at layby to boll opening. Applications may be made in a minimum of 15-25 gal of finished spray/A by ground and in a minimum of 5 gal of finished spray/A by air. The feeding of treated foliage or cotton trash to livestock and application after bolls have opened are prohibited.
	6 lb/gal EC	0.94-1.69 lb/A	2	3.3 lbs. ai/A	21	50	6 days	
	6.55 lb/gal EC [SLN]	1.64 lb/A	2	3.3 lbs. ai/A	21	50	6 days	
ULV application Aerial	6.55 lb/gal EC [SLN]	1.64 lb/A	3	NS	21	50 for AR830015 NS for MS830024 and TX830028	6 days	Use limited to AR, MS, and TX. Applications may be made midseason to layby and at layby to boll opening. ULV applications may be made in 2-3 qt of vegetable oil/A by air. Application after bolls have opened is prohibited.
Grape								
Broadcast foliar Ground	32% WP (WSP)	2.88 lb/A	2	NS	NS	21	27 days for Grapes (table) turning cane 16 days for all other Grapes	Use limited to regions west of the Rocky Mountains. Applications may be made in a minimum of 40 gal of finished spray/A by ground. The grazing or feeding livestock on cover crops grown among the vines is prohibited.

