

California Department of Food and Agriculture
Light Brown Apple Moth
Approved Treatments for Nurseries and Host Crops

Listed below are *examples* of approved products for control or prevention of Light Brown Apple Moth (LBAM) at nurseries and/or crop production areas. Establishments where a LBAM infestation has been detected must follow procedures outlined in the [LBAM Regulatory Procedures Manual](#).

Products not on the list below may be approved if they can be applied at the equivalent active ingredient (ai) rate specified for the example. Search products based on multiple categories (site and chemical code) at: <http://www.cdpr.ca.gov/docs/label/m4.htm>.

Label rates lower than approved quarantine rates may not be used for quarantine purposes.

It is incumbent upon the user to follow all label restrictions.

Target Life Stage: Eggs*/Larvae				
Active Ingredient	Product Examples	EPA Reg. #	Sites	Approved Quarantine Rates and Remarks
Chlorpyrifos with approved petroleum based paraffinic spray oil*	DuraGuard ME Dursban 50W Chlorpyrifos Pro 2 Chlorpyrifos Pro 4	499-367-ZA 62719-72-ZA 51036-152-AA 51036-154-AA	Ornamentals	Apply at label rate not less than 250 ppm ai by volume with approved superior-type spray oil at a rate of 1% or more by volume. Ensure thorough coverage of plant material. SEE LABEL
Lambda-cyhalothrin with approved petroleum based paraffinic spray oil*	Scimitar GC	100-1088-AA	Ornamentals	Apply at maximum label rate of 148 ml/100 gallons water (38 ppm ai by volume) with approved superior-type spray oil at a rate of 1% or more by volume. Ensure thorough coverage of plant material. SEE LABEL
Methoxyfenozide with approved petroleum based paraffinic spray oil*	Intrepid 2F	62719-442, See Supplemental label for ornamentals	Crops, Ornamentals, Christmas trees	Apply at label rate of 500 ml/100 gallons water (300 ppm ai by volume) with approved superior-type spray oil at a rate of 1% or more by volume. Ensure thorough coverage of plant material. SEE LABEL
Indoxacarb with approved petroleum based paraffinic spray oil*	Provaunt WG	352-716	Landscape Ornamental plants	Apply at label rate of 2.5 fl. oz./100 gallons water with approved superior-type spray oil at a rate of 1% or more by volume. Ensure thorough coverage of plant material. SEE LABEL
Chlorantraniliprole with approved petroleum based paraffinic spray oil*	Acelepryn	352-731	Landscape Ornamental plants	Apply at label rate of 2.0 fl. oz./100 gallons water with approved superior-type spray oil at a rate of 1% or more by volume. Ensure thorough coverage of plant material. SEE LABEL
Spinosad (including spinosyn A & D) with approved petroleum based paraffinic spray oil*	Conserve SC	62719-291-AA (SLN)	Ornamentals	Apply at maximum label rate of 650 ml/100 gallons water (22 fl.oz /100 gallons water) with approved superior-type spray oil at a rate of 1% or more by volume. Ensure thorough coverage of plant material. SEE LABEL
	Entrust	62719-282-AA (SLN)	Ornamentals	Apply at maximum label rate of 68 ml/100 gallons water (2.3 fl.oz /100 gallons water) with approved superior-type spray oil at a rate of 1% or more by volume. Ensure thorough coverage of plant material. SEE LABEL
		62719-282-AA (SLN)	Crops	Ensure thorough coverage of plant material. SEE LABEL

***An approved petroleum based paraffinic spray oil must be used to be considered an approved treatment for eggs/larvae. Examples of approved oils are below.**

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Approved petroleum based paraffinic spray oils must be in formulations of 97% or > oil concentration, with a spray concentration of 1% volume/volume oil in a tank mix with the other approved pesticide. Petroleum based paraffinic spray oils include narrow range horticultural mineral spray oils, superior-type spray oils, supreme oils, horticultural mineral oils, dormant spray oils, or petroleum derived spray oils. *Using a petroleum based paraffinic spray oil to target eggs is not an approved quarantine treatment when used alone.* The petroleum based paraffinic spray oils listed below are **examples** of approved oils, with 97% or > oil concentration. **Oils not on the list below may be used if they are equivalent to 97% petroleum oil concentration with 60% or greater paraffinic fractions and 92% or greater unsulfonated residues.**

Active Ingredient	Product Examples	EPA Reg. #	Sites	Approved Quarantine Rates and Remarks
Petroleum based paraffinic spray oil <ul style="list-style-type: none"> Equivalent to 97% petroleum oil 60% or greater paraffinic fractions 92% or greater unsulfonated residues Spray concentration of 1% volume/volume oil in a tank mix with the other approved pesticide An approved larvacide must be used to be considered an approved treatment for eggs/larvae. Approved larvacides are listed in the chart above, titled "Target Life Stage: Eggs*/Larvae." Using a petroleum based paraffinic spray oil to target eggs is not an approved quarantine treatment when used alone. 	Bonide All Seasons Commercial Horticultural and Dormant Spray Oil	4-80-ZB 4-80	Ornamentals and Crops	Apply at label rate. Ensure thorough coverage of plant material. SEE LABEL
	Purespray Green Organic Horticultural Spray Oil	69526-9-ZA 69526-9-AA 69536-9	Ornamentals and Crops	
	BASF Ultra-Pure Oil	69526-5-499		
	JMS Stilet Oil	65564-1-AA	Ornamentals and Crops	
	Helena Omni Oil 6E	5905-368-ZA	Crops, Ornamentals, Christmas trees	
	Wilbur Ellis 440 Superior Spray Oil	2935-546-ZB	Ornamentals and Crops	
	Wilbur Ellis 415 Superior Spray Oil	2935-546-ZC	Ornamentals and Crops	
	Wilbur Ellis 470 Supreme Spray Oil	2935-546-ZA	Ornamentals and Crops	
	Wilbur Ellis Supreme Spray Oil	2935-405		

Target Life Stage: Adults

Active Ingredient	Product Examples	EPA Reg. #	Sites	Approved Quarantine Rates and Remarks
Carbaryl	Sevin 4F	264- 349-ZB	Crops and Christmas trees	SEE LABEL
	Sevin SL	432-1227-ZA	Ornamentals, Crops and Christmas trees	
Chlorpyrifos	DuraGuard ME	499-367-ZA	Ornamentals	Apply at not less than 250ppm ai by volume. SEE LABEL
	Dursban 50W	62719-72-ZA		
	Chlorpyrifos Pro 2	51036-152-AA		
	Chlorpyrifos Pro 4	51036-154-AA		
Deltamethrin	Suspend SC	432-763-ZB	Ornamentals	SEE LABEL

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Target Life Stage: Larvae				
Active Ingredient	Product Examples	EPA Reg. #	Sites	Approved Quarantine Rates and Remarks
BT (<i>Bacillus thuringiensis</i>)	Crymax	70051-86-AA	Ornamentals and Crops	Two treatments required. Apply at maximum label rate. Treatments must not be after 12:00 p.m., unless under shade-cloth, to minimize UV exposure. Treated plants must be held and safeguarded for 10 days after first treatment. Re-apply 7 to 10 days after application of first treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
	Dipel Pro DF	73049-39-ZA		
	Deliver	70051-69		
	Javelin	70051-66		
	Dipel DF	73049-39-AA	Crops	
Carbaryl	Sevin 4F	264- 349-ZB	Crops and Christmas trees	Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
Chlorpyrifos	DuraGuard ME	499-367-ZA	Ornamentals	Apply at not less than 250ppm ai by volume. Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
	Dursban 50W	62719-72-ZA		
	Chlorpyrifos Pro 2	51036-152-AA		
	Chlorpyrifos Pro 4	51036-154-AA		
Dimethoate 400	Dimethoate	34704-207-ZA	Ornamentals and Crops	Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
Lambda-cyhalothrin	Scimitar GC	100-1088-AA	Ornamentals	Apply at maximum label rate of 148 ml/100 gallons water (38 ppm ai by volume). Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
Methoxyfenozide	Intrepid 2F	62719- 442-AA See supplemental label for ornamentals	Ornamentals, Crops and Christmas trees	Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
Phosmet	Imidan 70W Imidan 70 WP	10163-169-ZA 10163-169-AA	Ornamentals, Crops and Christmas trees	Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
Chlorantraniliprole	Acelepryn	352-731	Landscape ornamental plants	Apply at rate of 2.0 fl.oz per 100 gallons water. Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
Indoxacarb	Provaunt	352-716	Landscape ornamental plants	Apply at rate of 2.5 fl.oz per 100 gallons water. Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL

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Target Life Stage: Larvae <i>continued</i>				
Active Ingredient	Product Examples	EPA Reg. #	Sites	Approved Quarantine Rates and Remarks
Spinosad (including spinosyn A and D)	Conserve SC	62719-291-AA (SLN)	Ornamentals	Apply at maximum label rate of 650 ml/100 gallons water (22 fl. oz./100 gallons water). Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
	Entrust	62719-282-AA (SLN)	Ornamentals	Apply at maximum label rate of 68 ml/100 gallons water (2.3 fl.oz /100 gallons water). Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
		62719-282-AA (SLN)	Crops	Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL
Tebufenozide	Confirm 2F	62719-420-ZB	Crops and Christmas trees	Treated plants must be held and safeguarded for 10 days after treatment. Re-inspection cannot occur prior to end of 10 day holding period. SEE LABEL