



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

July 27, 2009

Matthew Brooks
LG Life Sciences
c/o Ag-Chem Consulting
12208 Quinque Lane
Clifton, VA 20124

Subject: Amendment – Supplemental Label
Lambdastar 1 CS
EPA Reg. No. 71532-25
Your submission dated May 29, 2009

Dear Mr. Brooks:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable subject to the comments listed below. Two (2) copies of the finished labeling must be submitted prior to releasing the product for shipment. A stamped copy of the label is enclosed for your records.

1. Delete "These new uses can be found on the EPA stamped label for LambdaStar 1 CS (71532-25) dated April 9, 2009" and add "affixed to LambdaStar 1 CS container" to end of the statement beginning "Follow all applicable directions ..." and ending "and precautions on the EPA registered label".

If you have any questions regarding this action, please contact BeWanda Alexander at Alexander.bewanda@epa.gov or (703) 305-7460.

Sincerely,

BeWanda Alexander for

Richard Gebken

Interim Product Manager 13

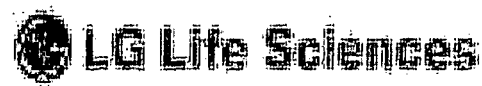
Insecticide Branch

Registration Division (7505P)

Enclosure

2 of 11

ACCEPTED
with COMMENTS
In EPA Letter Dated
JUL 27 2009
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
71532-25



910 Sylvan Ave
Englewood Cliffs N.J 07632

SUPPLEMENTAL LABELING

RESTRICTED USE PESTICIDE
Due to Toxicity to Fish and Aquatic Organisms
For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

GROUP 3 INSECTICIDE

LAMBDASTAR 1 CS Insecticide
EPA REG. NO. 71532-25

SUPPLEMENTAL DIRECTIONS FOR USE ON RICE; WILD RICE; CUCURBIT VEGETABLES; GRASS FORAGE; FODDER AND HAY; OAT, BARLEY, BUCKWHEAT AND RYE; PISTACHIO; AND TUBEROUS AND CORM VEGETABLES

Active Ingredient:	
Lambda-cyhalothrin.....	12.00%
Inert Ingredients:.....	88.00%
Total	100.00%

Contains 1 lb. of active ingredient per gallon.
LambdaStar 1 CS is an emulsifiable concentrate.

KEEP OUT OF REACH OF CHILDREN
WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

DIRECTIONS FOR USE:

It is a violation of Federal law to use this product inconsistent with its labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application. Follow all applicable directions, restrictions, Worker Protection Standard requirements, and precautions on the EPA registered label. These new uses can be found on the EPA stamped label for LambdaStar 1 CS insecticide (71532-25) dated April 9, 2009.

**CROP USE RECOMMENDATIONS
AGRICULTURAL USES**

CEREAL GRAINS

Barley, Buckwheat, Oats, Rye, Wheat, Wheat Hay, Triticale

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Army Cutworm Cutworm spp.	0.015-0.025	1.92-3.20	<p>Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details.</p> <p>Ground application: Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.</p> <p>Air application: Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.</p>
Armyworm Bird Cherry-Oat Aphid ¹ Cereal Leaf Beetle English Grain Aphid ¹ Fall Armyworm Flea Beetle spp. Grasshopper spp. Hessian Fly ⁴ Orange Blossom Wheat Midge Russian Wheat Aphid ¹ Stink Bug spp. Yellow-striped Armyworm	0.02-0.03	2.56-3.84	
Grass Sawfly	0.025-0.03	3.20-3.84	
Chinch Bug Corn Leaf Aphid ² Greenbug ^{1, 2} Mite Spp. ²	0.03	3.84	
<ul style="list-style-type: none"> • Do not apply within 30 days of harvest. • Do not allow livestock to graze in treated areas or harvest treated wheat forage as feed for meat or dairy animals within 7 days after last treatment. Do not feed treated straw to meat or dairy animals within 30 days after last treatment. • Do not apply more than 0.06 lb. a.i. (0.48 pt.) per acre per season. 			<p>Chinch Bug control: Repeat applications at 3- to 5-day intervals if needed. LambdaStar 1 CS may only suppress heavy infestations and/or migrations.</p> <p>Greenbug: Known to have many biotypes. LambdaStar 1 CS may provide suppression only. In this situation, a second application using an alternative chemistry may be needed.</p> <p>¹ Best control is obtained before insects begin to roll leaves. Once wheat has started to boot, LambdaStar 1 CS may provide suppression only. Higher rates and increased coverage will be necessary.</p> <p>²Suppression only.</p> <p>³See resistance statement under GENERAL INFORMATION.</p> <p>⁴ Make applications when adults emerge.</p>

CEREAL GRAINS

Rice, Wild Rice

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Bird Cherry-Oat Aphid Chinch Bug Fall Armyworm Grasshopper spp. Greenbug Leafhopper spp. Rice Stink Bug Riceworm Rice Water Weevil (Adult) Sharpshooter spp. True Armyworm Yellow Sugarcane Aphid Yellowstriped Armyworm	0.025-0.04	3.20-5.12	Mixers/loaders supporting aerial applications to wild rice at a rate of 0.04 lb. a.i. per acre, and treating 1200 acres (or more) per day must wear dust-mist respirator. Apply as required by scouting. Timing and frequency of application should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details. Determine the need for repeat applications, usually at intervals of 5-7 days, by scouting.
European Corn Borer ¹ Mexican Rice Borer ¹ Rice Seed Midge ¹ Rice Stalk Borer ¹ Sugarcane Borer ¹	0.03-0.04	3.84-5.12	LambdaStar ICS can be safely used when propanil products are being used for weed control. Ground application: Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. Air application: Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. In addition, adding an emulsifiable crop oil (e.g., 1 pt. per acre) when lower aerial application volumes are used is recommended to help improve coverage, reduce evaporation, and improve efficacy. For control of rice water weevil in dry seeded rice, make a foliar application as indicated by scouting for the presence of adults and/or feeding scars, usually within a time-frame of 0-5 days after permanent flood establishment. Do not exceed 10 days from starting permanent flood until insecticide application unless scouting indicates weevils have not been previously present. Adults may also be treated at later stages of rice development to reduce overwintering populations. For control of rice water weevil in water seeded rice, make the first foliar application after pinpoint flood as indicated by scouting for the presence of adults and/or feeding scars usually when rice has emerged 0.5 inch above the waterline. Under conditions of prolonged migration into the field, start field scouting for rice water weevil adults and/or feeding scars 3-5 days after the initial treatment and, if needed, apply a second application within 7-10 days of the first application. Adults may also be treated at later stages of rice development to reduce overwintering populations.

		<p><u>California:</u> In addition to above directions for control of rice water weevil in water seeded rice, LambdaStar 1CS may be applied at the 1-3 leaf growth stage, with the majority at the 2 leaf growth stage. Adults are vulnerable on levees and in the water. Larvae are vulnerable while feeding on the leaf prior to entering the soil. Monitor for adults, based upon field history and density of population. Monitor field edges and levee areas for adults. Treat in the following manner: a) spray the inside perimeter of the field, or b) spray the entire field.</p> <p>Greenbug is known to have many biotypes. LambdaStar 1CS may only provide suppression. If satisfactory control is not achieved with the first application of LambdaStar 1CS, a resistant biotype may be present. Use alternate chemistry for control.</p> <p>For control of stem borers, scout fields, when rice growth is near panicle differentiation, for early symptoms of damaging populations exhibited as discoloration (orange—tan) around the junction of the leaf sheath and leaf blade which is caused by feeding of young larvae within the sheath. Applications must be made before larvae bore into rice stems. Make the first application at panicle differentiation to 2 inch panicle for partial control. Make the second application at boot to heading for maximum control. All rice varieties are susceptible to stem borer damage, but Cocodrie and Priscilla are particularly susceptible.</p> <p>¹For control before the larvae bores into the plant stalk.</p>
<ul style="list-style-type: none"> • Do not apply within 21 days of harvest. • Do not release flood water within 7 days of an application. • Do not apply more than 0.12 lb. a.i. (0.96 pt.) per acre per season. • Do not apply more than 0.04 lb. a.i. (0.32 pt.) per acre within 21 to 27 days of harvest. • Do not use treated rice fields for the aquaculture of edible fish and crustacea. • Do not apply as an ultra-low volume (ULV) spray. 		

CUCURBIT VEGETABLES

Chayote (fruit); Chinese Waxgourd (Chinese preserving melon); Citron Melon; Cucumber; Gherkin; Gourd (edible) [*Lagenaria* species—includes: hyotan, cucuzza; *Luffa acutangula*, *L. cylindrical* - includes: hechima, Chinese okra] *Momordica* species — includes: balsam apple, balsam pear, bitter melon, Chinese cucumber; Muskmelon (hybrids and/or cultivars of *Cucumis melo*) — includes: true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon; Pumpkin; Squash, summer (*Cucurbita pepo* var. *melopepo*) — includes: crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini; Squash, winter (*Cucurbita maxima*; *C. moschata*)— includes butternut squash, calabaza, hubbard squash (*C. mixta*; *C. pepo*) - includes: acorn squash, spaghetti squash; Watermelon — includes: hybrids and/or varieties of *Citrullus lanatus*

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Armyworm spp. ¹ Blister Beetle spp. Cabbage Looper Corn Earworm Cricket spp. Cucumber Beetle spp. (adults) Cutworm spp. Flea Beetle spp. Grasshopper spp. June Beetle spp. Leafhopper spp. Leafhopper spp. Lygus Bug spp. ¹ Melonworm Pickleworm Plant Bug spp. Rindworm spp. complex Saltmarsh Caterpillar Squash Beetle Squash Bug spp. Squash Vine Borer spp. Stink Bug spp. Thrips spp. ^{1,2} Tobacco Budworm ¹ Webworm spp.	0.02-0.03	2.56-3.84	<p>Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details.</p> <p>Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher rates for longer residual.</p> <p>Insects that bore or tunnel into leaves, vines, stems or fruit must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of LambdaStar 1CS.</p> <p>Ground application: Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.</p> <p>Air application: Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.</p>
Aphid spp. ¹ Leafminer spp. ^{1,3} Spider Mite spp. ³ Whitefly spp. ^{1,3}	0.03	3.84	<p>¹See resistance statement under GENERAL INFORMATION. ²Does not include Western Flower Thrips ³Suppression only.</p>
<ul style="list-style-type: none"> Do not apply within 1 day of harvest. Do not apply more than 0.18 lb. a.i. (1.44 pts.) per acre per season. 			

GRASS FORAGE, FODDER AND HAY

Pasture and Rangeland Grass, Grass Grown for hay or Silage and Grass Grown for Seed

TARGET PESTS	RATE		REMARKS
	lb.a.i./A	fl.oz./A	
Army Cutworm Cutworm spp. Essex Skipper Range Caterpillar Striped Grass Looper	0.015-0.025	1.92-3.2	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details.
Beet Armyworm Billbug spp. ³ Bird Cherry-Oat Aphid ¹ Black Grass Bug Black Turfgrass Beetle (adult) Blue Stem Midge Cereal Leaf Beetle Chinch Bug Crane Fly spp. Cricket spp. English Grain Aphid ¹ Fall Armyworm Flea Beetle spp. Grass Mealybug Grass Sawfly (adult) Grasshopper spp. Green June Beetle (adult) Greenbug ^{1,2} Japanese Beetle (adult) Katydid spp. Leafhopper spp. Mite species ³ Russian Wheat Aphid ¹ Southern Armyworm Spittlebug spp. Stink Bug spp. Sugarcane Aphid Thrips spp. Tick spp. True Armyworm Webworm spp. Yellowstriped Armyworm	0.02-0.03	2.56-3.84	<p>Ground application: Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.</p> <p>Air application: Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.</p> <p>Use higher application volumes and rates when foliage is dense, pest populations are high, larvae are large and/or weather conditions are adverse. Use higher rates for longer residual.</p> <p>For chinch bug control, Lambdastar 1CS may only suppress heavy infestations and/or migrations. In this situation, a second application using an alternative chemistry may be needed.</p> <p>Greenbug is known to have many biotypes. Lambdastar 1CS may provide suppression only. In this situation, a second application using an alternative chemistry may be needed.</p> <p>Pasture and rangeland grass may be used for grazing or cut for forage 0 days after application. Do not cut grass to be dried and harvested for hay until 7 days after the last application.</p> <p>Grass grown for seed:</p> <ul style="list-style-type: none"> • Straw and mature seed (seed screenings) may be used as feed 7 days after the last application. Regrowth of grass grown for seed may be used for grazing, cut for forage or cut to be dried and harvested for hay. <p>¹Best control is obtained before insects begin to roll leaves. ²See resistance statement under GENERAL INFORMATION. ³Suppression only.</p>
<ul style="list-style-type: none"> • Do not apply more than 0.03 lb. a.i. (0.24 pt.) per acre per cutting for pastures, rangeland and grasses grown for seed. A minimum re-treatment interval (RTI) of 30 days is required for pastures and rangeland receiving 0.03 lb. a.i. per acre which have not been cut between applications. • Do not apply more than 0.09 lb. a.i. (0.72 pt.) per acre per season. 			

TREE NUTS

Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pistachio, Walnut [Black, English (Persian)]

Target Pests	Rate		Remarks
	lb. a.i./A	fl. oz./A	
Ants Chinch Bug Codling Moth Filbertworm Leaffooted Bug Leafroller spp. Navel Orangeworm Peach Twig Borer Plant Bug spp. Stink Bug spp. Walnut Aphid Walnut Husk Fly spp. (Adult)	0.02-0.04	2.56-5.12	Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold. Consult your local advisor or extension office for details. Ground application: Apply in a minimum of 50 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. Air application: Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas.
<ul style="list-style-type: none"> • Do not apply within 14 days of harvest. • Do not apply more than 0.16 lb. a.i. (1.28 pts.) per acre per year. • Do not apply more than 0.12 lb. a.i. (0.96 pt.) per acre per year post bloom. 			

TUBEROUS AND CORM VEGETABLES (Potato, Sweet Potato, Yams and Related)

Arracacha Arrowroot, Artichoke (Chinese and Jerusalem only), Canna (edible), Cassava (bitter and sweet), Chayote (root), Chufa, Dasheen, Ginger, Leren, Potato, Sweet Potato, Tanier, Turmeric, Yam (bean and true)

TARGET PESTS	RATE		REMARKS
	lb. a.i./A	fl. oz./A	
Cutworm spp. Leafhopper spp. Saltmarsh Caterpillar Sweet Potato Hornworm Woollybear Caterpillar spp.	0.015-0.025	1.92-3.20	Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Consult your local advisor or extension office for details.
Aphid spp. ¹ Armyworm spp. ¹ Blister Beetle spp. Colorado Potato Beetle ¹ Corn Earworm Cricket spp. Cucumber Beetle spp. (adults)	0.02-0.03	2.56-3.84	Ground application: Apply in a minimum of 10 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. Air application: Apply in a minimum of 2 gallons per acre using sufficient spray volume to obtain full coverage of foliage or target areas. Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher rates for longer residual.

<p>European Corn Borer Flea Beetle spp. (adults) Grasshopper spp. Looper spp.¹ Lygus Bug spp.¹</p> <p>Plant Bug spp. Potato Psyllid Potato Tuberworm</p> <p>Stink Bug spp. Sweet Potato Leaf Beetle (adults) Sweet Potato Vine Borer Thrips spp.^{1,2} Tortoise Beetle spp. Webworm spp. Weevil spp. (adults)</p>			<p>Insects that bore or tunnel into leaves, vines, stems, tubers or corms must be controlled before penetration, Only exposed insects (larvae and/or adults) can be controlled with foliar applications of LambdaStar 1CS.</p> <p>¹See resistance statement under GENERAL INFORMATION. ²Does not include Western Flower Thrips. ³Suppression only.</p>
<p>Leafminer spp.^{1,3} Whitefly spp.^{1,3} Spider Mite spp.³</p>	0.03	3.84	
<ul style="list-style-type: none"> • Do not apply within 7 days of harvest. • Do not apply more than 0.12 lb. a.i. (0.96 pt.) per acre per season. 			

BUFFER ZONE

Vegetative Buffer Strip

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing LambdaStar 1 CS onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers:

Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services.

USDA, NRCS. 2000. Fort Worth, Texas. 21 pp.

<http://www.in.csusda/v/technical/agronom/newconbuf.pdf>

In the State of New York, a 25 foot vegetated, non-cropped buffer strip untraversed by drainage tiles must be maintained between a treated field and a coastal salt marsh or stream that drains into a coastal salt marsh, for both aerial or ground application. For aerial applications, the 25 foot vegetated non-cropped buffer strip for runoff protection would be part of the larger 150 foot buffer strip (or 450 foot buffer strip for ULV application) required for spray drift.

Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Buffer Zone for ULV Aerial Application

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Buffer Zone for Non-ULV Aerial Application

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

SPRAY DRIFT REQUIREMENTS

Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition.

Do not apply when the wind velocity exceeds 15 mph.

Temperature Inversion

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.

Droplet Size

Use only Medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Additional Requirements for Ground Applications

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

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.

Additional Requirements for Aerial Applications

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.

Flight speed and nozzle orientation must be considered in determining droplet size.

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.

EPA 040909