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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

FEB 24 1997

Barry J. Santerre
Unicorn Laboratories
13535 Feather Sound Drive #400
Clearwater, FL 34622-5587

Subject: Unicorn SEVIN® brand Carbaryl Insecticide
EPA Registration No. 28293-222
Amendment dated November 1, 1996
Response to Agency letter dated 10/1/96

Dear Mr. Santerre:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable provided that you:

1. Make the following changes to your label:

a) In the SPECIFIC DIRECTIONS for asparagus, lettuce, and corn, change the spray interval to 7 days.

b) Each time it appears on your label, change the sentence "Repeat as necessary" to "Repeat as necessary, but not more than once a week."

2. Submit one copy of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the labeling is enclosed for your records.

Sincerely yours,

/s/

Dennis H. Edwards, Jr.
Product Manager (19)
Insecticide-Rodenticide Branch
Registration Division (7505C)

	CONCURRENCES							
SYMBOL	Enclosure							
SURNAME								
DATE								

EPA Form 1320-1A (1/90) *Printed on Recycled Paper* OFFICIAL FILE COPY

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UNICORN
SEVIN® brand Carbaryl Insecticide

Home and Garden Insecticide

ACTIVE INGREDIENT:	
Carbaryl (1-naphthyl N-methylcarbamate)	21.3% by wt.
INERT INGREDIENTS:	78.7% by wt.
	100.0%

(Contains 2 Pounds Carbaryl Per Gallon)

SEVIN is a registered trademark of Rhône-Poulenc for carbaryl insecticides.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Side/Back Panel for Additional Precautionary Statements.

NET CONTENTS:

Manufactured by:

UNICORN LABORATORIES
13535 Feather Sound Drive, Suite 400
Clearwater, FL 34622-5587

ACCEPTED
with COMMENTS
in EPA Letter Dated
FEB 24 1997
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 28293-222

'96 NOV 13 A9:16

RECD [illegible]/DPD1

EPA REG. NO. 28293-222(E:4/21/96)
(PRN96-6 & Carb 10/1/96)

EPA EST. NO. 62478-FL-1A
44616-MO-1B
Subscript used is first letter of run code on container.

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PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: May be harmful if swallowed. Avoid breathing of spray mist. Do not take internally. Avoid contact with eyes, skin or clothing. Wear regular long-sleeved work clothing. Change to clean clothing daily. Wash hands and face before eating. Wash thoroughly after handling.

USER SAFETY REQUIREMENTS
▶ Wear long-sleeved shirt, long pants, shoes plus socks and household latex or rubber gloves when mixing and applying this product. ▶ Wear a hat and eye protection when making overhead applications. ▶ Remove clothing immediately if pesticide soaks clothing. Change clothing as soon as possible after use. ▶ Wash the outside of gloves before removing. As with any pesticide product, wash hands thoroughly immediately after handling and before eating, smoking or using the toilet. ▶ Do not allow children or pets to contact treated area until sprays have dried.

Statement of Practical Treatment

IF SWALLOWED: Induce vomiting and seek medical attention immediately.

IF IN EYES OR ON SKIN: Flush eyes with plenty of water. Wash skin thoroughly with soap and water.

NOTE TO PHYSICIAN: Carbaryl is a moderate reversible cholinesterase inhibitor. Atropine is antidotal. Do not use 2-PAM, opiates, or cholinesterase inhibiting drugs.

Environmental Hazards

This product is extremely toxic to aquatic and estuarine invertebrates. Do not apply directly to water and areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning equipment or disposal of wastes. Do not apply when weather conditions favor drift from area treated.

BEE CAUTION: MAY KILL HONEYBEES IN SUBSTANTIAL NUMBERS. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops and weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Contact your Cooperative Agricultural Extension Service or your local representative for further information.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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Shake all containers prior to use. Do not reuse empty containers or measuring devices for other purposes. Apply when insects or damage appear. Apply when air is calm to avoid drift and contact with eyes and skin. Start spraying at the farthest corner of the treatment area and work backward to avoid contact with wet surfaces. Allow spray to dry in treated areas before reentering. For trees taller than 10 feet, consider hiring a licensed professional. Spray thoroughly to wet upper and lower leaf surfaces, stems and branches. Do not repeat applications more than once a week.

Do not plant rotational food and feed crops not listed on this or other carbaryl labels in carbaryl treated soil.

PLANT RESPONSE PRECAUTIONS

Carbaryl insecticide injures Boston Ivy, Virginia creeper, and maidenhair fern. During early season, it may also injure Virginia and sand pines.

HOSE END SPRAYER USE

This product readily disperses in water to form a spray that can be applied with garden hose applicators (hose-end sprayers) to the crops listed. To ensure adequate coverage, use moderate to high water pressure when applying through hose-end sprayers. Calibrate to deliver 1 fluid ounce per gallon of spray mixture.

VEGETABLE CROPS: For control of all the vegetable pests listed below, apply this product in adequate volume to effectively cover both the upper and lower surfaces of the plant.

NOTES: 1) This product is not registered for use on celery and sweet potato in California; 2) Do not treat asparagus more than once every 3 days as excessive residues may result; and 3) The number in parenthesis following each vegetable crop grouping refers to the minimum number of days that must be observed between the date of the last application and the date of harvest.

CROPS

Beans (including Black-eyed peas, Crowder or Southern peas, Dry beans, Green beans, Lima beans, Navy beans, and Snap beans); Carrots, Corn, Cucumber, Eggplant, Melons, Okra, Peanuts, Pepper, Potato, Pumpkin, Squash, Sweet Potato, Tomato - (0 days until harvest).

Broccoli, Brussels sprouts, Cabbage, Cauliflower, Cowpeas, Garden beet roots, Head lettuce, Horseradish, Kohlrabi, Parsnips, Peas, Radishes, Rutabagas, Salsify roots, Turnip roots (3 days until harvest).

Celery, Chinese cabbage, Collards, Dandelion, Endive (Escarole), Garden beet tops, Hanover salad, Kale, Mustard greens, Leaf lettuce, Parsley, Salsify tops, Spinach, Swiss chard, Turnip tops - (14 days until harvest).

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PESTS		
Alfalfa caterpillar	Green cloverworm	Stink bugs
Apache cicada	Harlequin bug	Sweet potato hornworm
Armyworm	Imported cabbageworm	Sweet potato weevil
Asparagus beetle	Japanese beetle	Tarnished plant bug
Aster leafhopper	Lace bugs	Three cornered alfalfa hopper
Bean leaf beetle	Leafhoppers	Thrips
Blister beetles	Limabean pod borer	Tomato hornworm
Chinch bug	Lygus bugs	Tomato pinworm
Colorado potato beetle	Melonworm	Tortoise beetles
Corn earworm	Mexican bean beetle	Velvetbean caterpillar
Corn rootworm (adults)	Pea leaf weevil	Webworms
Cowpea curculio	Pea weevil	Western bean cutworm
Cucumber beetles	Pickeworm	Whitefringed beetle (adults)
Cutworms	Red necked peanut worm	Yellowstriped armyworm
European corn borer	Sap beetles	
Fall armyworm	Southwestern corn borer	
Flea beetles	Spittlebugs	
Grasshoppers	Squash bugs	

FRUIT AND NUT CROPS

For control of all fruit and nut pests listed below, use sufficient spray volume to obtain thorough coverage (spray until run-off). Direct applications toward the lower and upper leaf surfaces, between fruit and nut clusters, and limbs and tree trunks to optimize insect control.

NOTES: 1) To avoid undesired apple thinning, delay use until at least 30 days after full bloom; 2) Carbaryl insecticide may injure early dawn and sunrise strawberries varieties on the Delmarva Peninsula; 3) When used on cranberries, SEVIN® brand carbaryl may kill shrimp and crabs; and 4) The number in parenthesis following each fruit and nut crop grouping refers to the minimum number of days that must be observed between the date of the last application and the date of harvest.

CROPS:

Blueberries, Filberts, Pecans, Walnuts - (0 days until harvest).

Apples, Cherries, Cranberries, Peaches, Pears, Plums, Prunes, Strawberries - (1 day until harvest).

Apricots, Nectarines - (3 days until harvest).

Citrus fruits (such as Grapefruit, Lemons, Limes, Oranges, Tangelos, Tangerines, Citrus citron, Kumquats and Hybrids) - (5 days until harvest).

Blackberries, Boysenberries, Dewberries, Loganberries, Raspberries, Grapes - (7 days until harvest).

Almonds - (28 days until harvest).

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PESTS		
Apple aphid	European raspberry aphid	Pear leaf blister mite
Apple maggot	Eyespotted budmoth	Pear psylla
Apple mealybug	Fall webworm	Pear rust mite
Apple pandemis	Filbert aphid	Pecan leaf phylloxera
Apple rust mite	Filbert leafroller	Pecan nut casebearer
Apple sucker	Filbertworm	Pecan spittlebug
Avocado leafroller	Forbes scale	Pecan weevil
Bagworms	Fruittree leafroller	Periodical cicada
Black cherry aphid	Frosted scale	Plum curculio
Black margined aphid	Grape berry moth	Prune leafhopper
Black Scale	Grape leafhopper	Raspberry sawfly
Blueberry maggot	Grape leaffolder	Redbanded leafroller
Brown soft scale	Green fruitworm	Rose chafer
Calico scale	Hickory shuckworm	Rosy apple aphid
California orangedog	Japanese beetle	Saltmarsh caterpillar
California pearslug (pear sawfly)	June beetles	San Jose scale
California red scale	Leafhoppers	Snowy tree cricket
Cherry fruitworm	Leafrollers	Strawberry weevil
Cherry maggot	Lecanium scales	Tarnished plant bug
Citricola scale	Lesser appleworm	Tentiform leafminers
Citrus cutworm	Lesser peachtree borer	Twig girdler
Citrus room weevil	Lesser webworm	Tussock moth
Citrus snow scale	Meadow spittlebug	Variegated leafroller
Coding moth	Mealy plum aphid	Walnut caterpillar
Cranberry fireworms	Naval orangeworm	Western grapeleaf skeletonizer
Cranberry fruitworm	Olive scale	Western tussock moth
Cucumber beetles	Omnivorous leaftier (strawberry fruitworm)	Western yellowstriped armyworm
Cutworms	Omnivorous leafroller	West Indian sugarcane borer (adults)
Eastern tent caterpillar	Orange tortrix	White apple leafhopper
Eightspotted forester	Oriental fruit moth	Wolly apple aphid
European apple sawfly	Oystershell scale	Yellowheaded fireworm
European earwig	Peach twig borer	
European fruit lecanium		

TREES AND ORNAMENTAL PLANTS

Thorough coverage of upper and lower leaf surfaces and trunks, stems and twigs is necessary for optimum control of tree and ornamental pests. Apply to each of these areas until run-off is observed.

CROPS: Trees (including Shade trees, Shelter belts, Plantations, Parks and Recreational areas), Ornamentals (including Roses and other Herbaceous plants), Woody plants, and Shrubs.

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PESTS

Ants
Apple aphid
Armyworm
Azalea leafminer
Bagworms
Birch leafminer
Blister beetle
Boxelder bug
Boxwood leafminer
Browntail moth
Cankerworms
Catalpa sphinx
Chiggers
Cooley spruce gall adelgid
Cutworms
Cypress tip moth
Douglas-fir tussock moth
Eastern spruce gall adelgid
Elm leaf aphid
Elm leaf beetle
Elm spanworm
Eriophyid mites
European pine shoot moth
Fall armyworm
Flea beetle
Fuller rose beetle
Gall midges
Gall wasps
Grasshoppers
Greenstriped mapleworm
Gypsy moth
Hackberry nipplegall maker
Holly budmoth
Holly leafminer
Jackpine budworm
Japanese beetle
Jeffrey pine needleminer
Lace bugs
Leafhoppers
Leafrollers
Locust borer
Maple leafcutter
Mealybugs
Mimosa webworm
Nantucket pine tip moth
Oak leafminers
Oak leaf skeletonizer
Oakworm complex
Oleander caterpillar
Olive ash borer
Orangestripped oakworm
Orange tortrix
Periodical cicada
Pine sawfly
Pine spittlebug
Pitch pine tip moth
Plant bugs
Poinsettia hornworm
Psyllids
Puss caterpillar
Redhumped oakworm
Rose aphid
Rose chafer
Roseslug
Saddled prominent
Sawflies (exposed)
Scale insects
Sowbugs
Spiny elm caterpillar
Springtails
Spruce budworm
Spruce needleminer
Subtropical pine tip-moth
Tent caterpillar
Thrips (exposed)
Ticks
Tree hoppers
Walnut caterpillar
Webworm
Western hemlock looper
Western spruce budworm
Willow leaf beetles
Yellow poplar weevil

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LAWNS AND RECREATIONAL AREAS

For optimum control of lawn pests it is essential to ensure good penetration of the turf. For best results mow lawn and make applications after watering or rain. Following application, additional watering of lawn will enhance white grub control. For imported fire ant control, apply directly to the mound and surrounding area. (Do not disturb mounds prior to treatment). Treat new mounds as they appear. A volume of 16 to 24 fluid ounces of this product will cover approximately 3500 square feet when diluted as directed.

PEST CONTROL

Apply 16 fluid ounces of this product to cover 3000 sq. ft. (32 fluid ounces per 6000 sq. ft.) for control of: Ants, Armyworm, Centipede, Chiggers, Cutworms, Earwigs, Essex skipper, European chafer, Fall armyworm, Fiery skipper, Grasshoppers, Green June beetles grubs, June beetles, Leafhoppers, Lucerne moth, Millipedes, Adult mosquitoes, Sowbugs, Spittlebugs, Springtails, Ticks, Yellowstriped armyworm.

Apply 16 fluid ounces of this product to cover 1,350 sq.ft. (32 fluid ouces per 2,700sq.ft.) for control of: Chinch bugs, Sod webworms, Bluegrass billbug, European crane fly, Fleas and White grubs (such as Japanese beetle, Chafer beetle and Phyllophaga spp. larvae).

ADULT MOSQUITO CONTROL

For optimum results, treatments should be made in the early morning or late evening, when adult mosquitoes are most active. In yards and recreational areas, apply to ornamentals, woody plants, shrubs, and other areas where adult mosquitoes congregate. **(NOTE: CARBARYL MAY KILL SHRIMP AND CRABS. OBSERVE BEE CAUTION.)**

PEST CONTROL AROUND BUILDINGS

This product may be used around building such as homes, apartments, warehouses, barns and municipal and recreational areas to control the pests listed below. Thoroughly wet the outside perimeter of dwellings and other areas where pests tend to congregate.

PESTS

Brown dog tick, earwigs, fleas and millipedes.

CONTROL OF TICKS WHICH TRANSMIT LYME DISEASE

For control of juvenile and adult Ixodes spp. Ticks (Deer tick, Bear tick, and Black legged tick) and Amblyomma spp. Ticks (Lone Star tick).

Begin application in late spring or early summer (May/June). Thoroughly treat entire lawn, perimeter wooded areas, and property boundaries including shrub beds, ornamental planting, and wooded areas where exposure to ticks may occur. Retreat at 3 to 4 week intervals since ticks may be reintroduced from surrounding areas by animals.

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VEGETABLE CROPS

All dosages refer to teaspoonsful of this product per gallon water. Do not exceed maximum dosage rate.

CROP	INSECT		TEASPOONSFUL/ GALLON	PRE HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Asparagus	Asparagus beets Grasshoppers		4 to 8	1	Treat ferns or brush growth. Do not treat more than once every 3 days.
	Apache cicada Asparagus beetle		8 to 16	Post harvest application only	
Beans (Including black-eyed peas, cowpeas crowder or southern peas, dry beans, green beans, lima beans, navy beans and snap beans)	Blister beetles Mexican bean beetle		2 to 4		
	Alfalfa caterpillar Bean leaf beetle Cucumber beetles Flea beetles Green cloverworm Japanese beetle	Leafhoppers Three cornered alfalfa hopper Thrips Velvetbean caterpillar Western bean cut-worm	4	0 (Except cowpeas) 3 (cowpeas)	
	Armyworm Cutworms European corn borer	Fall armyworm Grasshoppers Tarnished plant bug Webworms	4 to 6		
	Corn earworm Cowpea curculio	Limabean pod borer Lygus bugs Stink bug	8		
Broccoli Brussels sprouts Cabbage Carrots Cauliflower Celery Chinese cabbage Collards Dandelion Endive (Escarole) Garden beet Hanover salad Horseradish Kale Kohlrabi Lettuce	Flea beetles Harlequin bug	Leafhoppers	2 to 4	0 (carrots, okra)	DO NOT USE ON CELERY IN CALIFORNIA
	Aster leaf-hopper Grasshoppers	Lygus bugs Spittlebugs	4 to 6	3 (broccoli, brussels sprouts, cabbage, cauliflower, garden beet roots, head lettuce, horseradish, kohlrabi, parsnips, salsify roots, radishes, rutabagas, turnip roots	Observe plant response precautions. Lettuce: treat on a 5 to 7 day schedule after heads being to form.
	Armyworm Corn earworm Fall armyworm Tarnished plant bug	Imported cabbageworm Stink bugs	4 to 8		

Vegetable Crops (Continued)

CROP	INSECT	TEASPOONSFUL/ GALLON	PRE HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Mustard greens Okra, Parsnips	(See previous page)	(See previous page)		
Parsley Radishes Rutabagas Salsify Spinach Swiss chard Turnips	(See previous page)	(See previous page)	14 (Chinese cabbage, celery, collards, dandelion, endive (escarole), Garden beet tops, Hanover salad, kale, mustard greens, leaf lettuce, parsley, salsify tops, spinach, Swiss chard and turnip tops)	
Corn	Armyworm, Chinch bug, Corn earworm, Corn rootworm (adults), European corn borer, Fall armyworm, Flea beetles, Grasshoppers, Japanese beetle, Leafhoppers, Sap beetles, Southwestern corn borer	4 to 8	0	OBSERVE BEE CAUTION For insects attacking silks and ears, apply at 1 to 6 day intervals starting when first silks appear and continuing until silks begin to dry. For larvae in whorl and foliage feeders, apply as necessary. Optimum timing and good coverage are essential for effective control.
	Western bean cutworm	8		Treat when infestation averages 15% and at 90 to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness.
Cucumber Melons	Pickeworm, Melonworm	2 to 4		
Pumpkin Squash	Cucumber beetles, Flea beetles, Grasshoppers, Leafhoppers, Squash bugs	4	0	
Potato Tomato Eggplant Pepper Peanuts Peas	Bean leaf beetle, Blister beetles, Colorado potato beetle, Cucumber beetles, Flea beetles, Green cloverworm, Japanese beetle, Leafhoppers, Mexican bean beetle, Red-necked peanutworm, Three cornered alfalfa hopper, Thrips, Velvetbean caterpillar	4	0 (Except peas) 3 (peas)	

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Vegetable Crops (Continued)

CROP	INSECT		TEASPOOSFUL/ GALLON	PRE HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
(See Previous Page)	Alfalfa caterpillar Armyworm Corn earworm Grasshoppers	Pea leaf weevil Pea weevil Webworms Yellowstriped armyworm	6	0 (Except peas) 3 (peas)	
	European corn borer Fall armyworm Lace bugs Stink bugs	Tarnished plant bug Tomato hornworm Tomato pinworm	4 to 8		
	Cutworms	White fringed beetle (adults)	6 to 8		
Sweet Potato	Corn earworm Cucumber beetles Flea beetles Grasshoppers	Sweet potato hornworm Tortoise beetles	4 to 8		Apply as a foliar spray as needed. Full coverage is essential. Use Lower rate on young plants And higher rates on mature plants. **DO NOT USE IN CALIFORNIA.**
	Yellowstriped armyworm		8	0	
	Sweet potato weevil		4 to 8		

FRUIT AND NUT CROPS

All dosages refer to teaspoonsful of this insecticide per gallon of water. Use sufficient spray gallonage to obtain thorough coverage. (Six teaspoons equal one fluid ounce).

CROP	INSECT	TEASPOOSFUL/ GALLON	PRE HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Apple thinning (Apples only)		1 to 2	1	Apply 1 full coverage dilute spray between 10 and 25 days after full bloom. If factors such as tree age, variety, nutrition, previous crop, pruning, bloom and degree of set favor excessive fruit thinning with this product, exercise caution to avoid possible yield reduction. For easily thinned varieties including Cortland, Grimes, Jonathan, McIntosh, Orleans, Rome, Puritan, Red Delicious, Winesap, Yellow Newton
		2 to 4		For difficult to thin varieties Including Baldwin, Ben Davis, Duchess, Early McIntosh, Golden Delicious, Lady Apple, Northern Spy, Rhode Island Greening, Steele Red, Turley, Wealthy, Yellow Transparent and York Imperial.

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Fruit & Nut (Continued)

CROP	INSECT	TEASPOONSFUL/ GALLON	PRE HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Almond	Peach twig borer Fruittree leafroller San Jose scale	4	28	Apply in "popcorn" or petal fall stages and again when the May brood of the peach twig borer begins to hatch or thereafter as needed.
	Naval orangeworm			Time early and mid season applications to correspond to moth flight peaks. Make a late season application at initiation of hull split or up to 10% hull split.
Apples Pears	Apple aphid Apple maggot Apple mealybug Apple rst mite Apple sucker Bagworms California pearslug (pear sawfly) Coding moth Eastern tent caterpillar European apple sawfly Eyespotted bud moth Forbes scale Fruittree leafroller Green fruitworm Japanese beetle Lecanium scales Lesser appleworm Oystershell scale scale Orange tortrix Pear leaf blister mite Pear psylia Pear rust mite Periodical cicada Redbanded leafroller Rosy apple aphid San Jose scale Tarnished plant bug Tentiform leafminers White apple leafhopper Wooly apple aphid Yellowheaded fireworm	4	1	To avoid undesired apple thinning, delay use until at least 30 days after full bloom. For psylla control, apply when eggs hatch or young nymphs are present. For optimum scale control, apply When crawlers are present.
Blackberries Raspberries Dewberries (Including boysenberries and logan-berries) Grapes Strawberries	European fruit lecaniun European raspberry Grape leaf-hopper Grape leaf-folder Japanese beetle Leafhoppers Leafrollers Meadow spittlebug Rose chafer Snowy tree cricket Strawberry weevil Western grapeleaf skeletonizer Yellow striped armyworm	4 to 8	1 (strawberries) 7 (blackberries, dewberries	Apply before first brood leaffolder larvae emerge from rolls. STRAWBERRIES: Carbaryl may injure Early Dawn and Sunrise varieties on the Delmarva Peninsula.

Fruit & Nut (Continued)

CROP	INSECT		TEASPOONSFUL/ GALLON	PRE HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
(See Prev. Page)	Omnivorous leaftier (strawberry fruitworm)			raspberries boysenberries logenberries and grapes)	
	Cutworms Eight spotted forester Grape berry moth Japanese beetle Omnivorous leafroller	Orange tortrix Raspberry sawfly Redbanded leafroller Saltmarsh caterpillar	8		
Blueberries	Blueberry maggot Cherry fruit worm Cranberry fruitworm	European fruit lecanium Japanese beetle	6	0	Apply 3 weeks before harvest and Repeat as necessary.
Citrus fruits (such as grapefruit, lemons, limes, oranges, tangelos, tangerines, citrus citron, kumquats, and hybrids)	Avocado leafroller California orangedog Citrus cutworm Citrus root weevil Fruittree leafroller	Orange Tortrix Western tussock moth West Indian sugarcane borer (adults)	4	5	Do not apply less than 10 gallons of dilute spray mixture per mature tree. May be mixed with petroleum Oils commonly used on citrus.
	Black scale Brown soft scale California red scale Citricola scale	Citrus snow-scale Yellow scale Yellow scale	3 to 4		
Cranberries	Cutworms fireworms Cranberry	Japanese Leafhoppers Rose chafer	6 to 12	1	CAUTION: May fill shrimp and crabs. Do not use in areas where these are important resources. Apply in late bloom and as needed 7 to 10 day intervals.
Filberts	Filbert aphid Filbert leafroller Filbertworm		4	0	Apply when leafroller eggs are hatching. Repeat on first appear-Ance of adult filbert moths and again 3 to 4 weeks later.

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Fruit & Nut (Continued)

CROP	INSECT		TEASPOOSFUL/ GALLON	PRE HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Apricots Cherries Nectarines Peaches Plums Prunes	Apple pan-demis Black cherry aphid Brown soft scale Cherry fruitworm Cherry maggot Cucumber beetles European earwig Eyespotted bud moth Forbes scale Fruittree leafroller Green fruitworm Japanese beetle June beetles Lecanium scale Tarnished plant bug Variegated leafroller	Oriental fruit moth Oystershell scale Peach twig borer Periodical cicada Lesser peach-tree borer Mealy plum aphid Olive scale Oriental fruit moth Oystershell scale Peach twig borer Periodical cicada Plum curculio Prune leaf-hopper Redbanded leafroller Rose chafer San Jose scale	4	1 (Cherries, peaches, plums and prunes) 3 (Apricots and nectarines)	For optimum scale control apply when crawlers are present. For lesser peachtree borer control, spray limbs and tree trunks thoroughly, weekly during moth flight.
	Coding moth Eastern tent caterpillar	Orange tortrix Tussock moth	3 to 4		
Pecans	Black margined aphid Fall webworm Hickory shuck worm Lesser web-worm Pecan leaf phylloxera	Pecan nut casebearer Pecan spittlebug Pecan weevil Twig girdler Walnut caterpillar	4 to 10	0	
Walnut	Calico scale Coding moth European fruit lecanium	Filbertworm Fruittree leafroller Frosted scale	2	0	For coding moth apply spray when average cross sectional diameters of developing nuts are ½ to 3/4 inch. Repeat during middle or late June as needed.
	European earwig		8		Spray tree trunks to point of run-off.

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TREES AND ORNAMENTALS

For dilute spray applications to trees (including shade trees, shelter belts, plantations, parks and recreational areas), ornamentals, woody plants and shrubs, apply the specified dosage per gallon of water in sufficient spray volume to provide thorough coverage, (six teaspoons equal one fluid ounce).

SITE	INSECT				SPECIFIC DIRECTIONS
GROUND APPLICATION Trees (Including shade trees, shelter belts, plantations parks and recreational areas) Ornamentals (Including roses and other herbaceous plants) Woody Plants and Shrubs	Ants Apple aphid Armyworm Azalea leaf-miner Bagworms Birch leaf-miner Blister beetle Boxelder bug Boxwood leafminer Browntail moth Cankerworms Catalpa sphinx Chiggers Cooley spruce gall adelgid Cutworms Cypress tip moth Douglas-fir tussock moth Eastern spruce gall adelgid Elm leaf aphid Elm leaf beetle Elm span-worm Eriophyid mites European pine shoot moth	Fall armyworm Flea beetles Fuller rose beetle Gall midges Gall wasps Grasshoppers Greenstripped mapleworm Gypsy moth Hackberry nipplegall maker Holly leaf-miner Jackpine budworm Japanese beetle Jeffrey pine needleminer June beetles Lace bugs Leafhoppers Leafrollers Locust borer Maple leafcutter Mealybugs Mimosa webworm Nantucket pine tip moth Oak leafminers Oak Leaf skeletonizer	Oakworm complex Oleander caterpillar Olive ash borer Orange striped oakworm Orange tortrix Periodical cicada Pine sawfly Pine spittlebug Pitch pine tip moth Plant bugs Poinsettia hornworm Pysllids Puss caterpillar Redhumped oakworm Rose aphid Rose chafer Roseslug Saddled prominent Sawflies (exposed) Scale insects Sowbugs Spiny elm caterpillar	Springtails Sruce budworm Spruce needle-miner Subtropical pine tip moth Tent caterpillar Thrips (exposed) Ticks Tree hoppers Walnut caterpillar Webworms hemlock looper Western spruce budworm Willow leaf beetles Yellow poplar weevil	Use 4 teaspoons of this product per gallon of water. Observe plant response precautions. Apply dilute sprays to obtain thorough coverage of upper and lower leaf surfaces. To control scale insects, treat trunks, stems, and twigs in addition to plant foliage. For optimum worm control, treat wen in early instars. Addition of a sticker may improve residual control.
	Ips engraver beetles Mountain pine beetle Roundheaded pine beetle				Use 13.3 fluid ounces of this product per gallon of water. Effective as preventative treatment only. Repeat annually as required to prevent beetle attacks. Apply 1 gallon of spray er 50 sq.ft. of bark in late May to early July or prior to beetle attack. Treat tree trunks from ground level up until trunk diameter is less than 5 inches.

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SITE	INSECT		SPECIFIC DIRECTIONS
Turf grasses	Ants Armyworm Centipedes Chiggers Earwigs Essex skipper European chafer Fall armyworm Fiery skipper Grasshoppers June beetles	Leafhoppers Lucerne moth Millipedes Mosquitoes (adults) Sod webworm (lawn moths) Sowbugs Springtails Ticks White grubs Yellow striped armyworm	Use 3 to 6 fl.oz. Of this product per 1000 sq.ft. (4 to 8 qts. per acre) of turf grass. Make application in sufficient spray volume for thorough coverage and turf thatch penetration. Repeat as necessary. Repeat as necessary. For Armyworm, Cutworm, and Fall Armyworm Control: Do not irrigate treated areas following insecticide application.
	Chinch bugs	Sod webworm (lawn moths)	Use 8.8 to 12 fl.ozs. of this product per 1000 sq.ft. (12 to 16 qts. per acre) of turf grass. Make application in sufficient spray volume for thorough coverage and turf thatch penetration. Repeat as necessary. **For Chinch Bug Control:** Treat entire area rather than just damaged areas. Irrigation of turf grass areas before insecticide applications will aid in penetration into turf grass. **For Sod Webworm Control:** Do not irrigate treated areas following insecticide application.
	Bluegrass billbug European crane fly Fleas	White grubs (such as: Japanese beetle, Chafer beetle and Phyllophaga spp. larvae)	Use 12 fl.ozs. of this product per 1000 sq.ft. (16 qts. per acre) of turfgrass. Make application in sufficient spray volume for thorough coverage turf thatch penetration. Repeat as necessary. **For European Crane Fly Control:** Treatments should be applied in early spring, April 1 to April 15, or as recommended by local Agricultural Extension Service agents. Water or irrigate turf grasses thoroughly soon after treatment. **For White Grub Control:** Applications should be made when grubs are feeding near the soil surface usually during late March through May, or July to early September, or as recommended by local Agricultural Extension Service agents. Water or irrigate turf grasses thoroughly soon after treatment.

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LAWNS AND RECREATIONAL AREAS FOR USE IN CALIFORNIA

SITE	INSECT		SPECIFIC DIRECTIONS
Turf grasses	Ants Armyworm Bluegrass billbug Centipedes Chiggers Chinch bugs Cutworms Earwigs Essex skipper European chafer Fall armyworm Fiery skipper Fleas Grasshoppers	June beetles Leafhoppers Lucerne moth Millipedes Mosquitoes Sod webworm (lawn moths) Sowbugs Springtails Ticks White grubs Yellowstriped armyworm	Use 12 fl.oz. of this product per 1000 sq.ft. (16 quarts per acre) of turf grass. Make application in sufficient spray volume for thorough coverage and turf thatch penetration. Repeat as necessary. **For Armyworm, Cutworm, and Fall Armyworm Control:** Do not irrigate treated areas following insecticide applicaiton. **For Chinch Bug Control:** Treat entire turf grass area rather than just damaged areas. Irrigation of turf grass area before insecticide application will aid in penetration into turf grass. **For White Grub Control:** Applications should be made when grubs are feeding near the soil surface, usually during late March through May, or July to early September or as recommended by local Agricultural Extension Service agents. Water or irrigate turf grasses thoroughly soon after treatments

IMPORTED FIRE ANT CONTROL

For use as a mound treatment to control imported fire ants, apply the specified dosage directly to mound.

SITE	TEASPOONSFUL/ GALLON	SPECIFIC DIRECTIONS
Lawns, Cemeteries and Recreational Areas (including turf, golf courses, and parks), Pastures, Rangeland, Forested lands, and Wasteland	6 teaspoonsful/Gallon (1 fl. oz./gal.)	**DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.** Apply a total of 2 gallons of the diluted solution over the surface of each mound or at least 1 quart per 6 inches of mound diameter using a bucket, can or other appropriate equipment. Thoroughly wet mound and surrounding area to a 4 ft. diameter (12 sq.ft.). Do not disturb mounds prior to treatment. Pour solution from a height of about 3 ft. to give sufficient force to break mound apex and flow into ant tunnels. For best result, apply in cool weather, 65 to 80°F, or in early morning or late evening hours. Repeat application if mound activity resumes after 10 days. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness. 1 Tablespoon = ½ fluid ounce of product

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CONTROL OF TICKS WHICH TRANSMIT LYME DISEASE

SITE	SPECIFIC DIRECTIONS
Lawns and Lawns and Recreational Turfgrass (Including: Lawns & Perimeters, Golf Courses, Sports Fields, Cemeteries, Parks and Pastures)	For control of juvenile and adult Ixodes spp. ticks (Deer tick, Bear tick, and Black legged tick) and Amblyomma spp. ticks (Lone Star tick) apply at the rate of 2 tablespoons (1 fluid ounce) per gallon of water.
Shrubs, Ornamentals, Wooded Areas (Including: Military Posts, Logging camps, and Campsites) Wastelands	Begin applications in late spring or early summer (May/June). Thoroughly treat entire turf area, shrub beds, ornamental plantings, wooded areas, and around outside perimeters of homes/buildings where exposure to ticks may occur. Retreat at 3 to 4 week intervals since ticks may be reintroduced from surrounding areas by animals.

ADULT MOSQUITO CONTROL

SITE	SPECIFIC DIRECTIONS
Yards and Recreational Areas	**CAUTION:** May kill shrimp and crabs. Do not use in areas where these are important resources. **OBSERVE BEE CAUTION. Avoid direct application.** For dilute-spray ground applications to trees (including shade trees, shelter belts, plantations, parks and ecreational areas), ornamentals, woody plants and shrubs, apply 1 to 2 tablespoons of this insecticide per gallon of water. Treat shrubbery and areas where adult mosquitoes congregate. Treat when adult mosquitoes are active in early morning or late evening. Repeat at 7 to 10 day intervals. For residual control in subtropical regisions use 16 fluid ounces of this product per gallon of water and apply 4 gallons of prepared spray per 2000 square feet of surface area. Repeat in 3 to 6 months or when necessary.

PEST CONTROL IN AND AROUND BUILDINGS

Dosages refer to ounces of product per gallon of water.

INSECT	OUNCES/GALLON	SPECIFIC DIRECTIONS
Brown dog tick Earwigs, Fleas, Millipedes, Silverfish	7 ounces/gal.	For use in and around buildings such as homes, apartments, warehouses, Barns and municipal and recreational areas. Apply as coarse wet spray or with a paint brush to outdoor sleeping quarters of pets, outside perimeter of dwellings and other areas where insects tend to congregate.
Ants Cockroaches	17 ounces/gal.	Do not use this product in commercial food areas of food handling establishments, restaurants, or other places where food is prepared or processed. Avoid application to surfaces where visible spray residues are objectionable.

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POULTRY INSECT CONTROL

POULTRY	INSECT	SPECIFIC DIRECTIONS
Chickens Ducks Geese Gamebirds Pigeons Turkeys	Chicken mite Fleas Lice Northern fowl mite	For use as a direct spray on birds by: **1. Misting with Electric Fog Machine:** Mix 20 ounces of product in 1 gallon of spray. Use 1½ gallon per 1000 hens in cages, on litter or on slatted floor. Repeat in 4 weeks if necessary. OR **2. Spraying with knapsack or cylinder type compressed air sprayers:** Mix 12 ounces of this product in 5 gallons of spray. Use 1 gallon per 100 hens in cages, on litter or on slatted floor. Repeat in 4 weeks if necessary. Direct mist spray for chicken mite and fleas as a supplement to spraying insects and buildings for control of these pests. Do not apply to poultry and game birds within 7 days of slaughter.

POULTRY ROOSTS AND BUILDING ONLY

POULTRY QUARTERS	AMOUNT/GALLON	SPECIFIC DIRECTIONS
Bed bugs Chicken mites Fleas Lice Northern fowl mite	5 tablespoons/gal.	Apply 12 to 25 ounces of spray mixture per 100 square feet of wall, litter or roost surface. Force spray into cracks. Repeat as needed. Avoid contamination of nests, eggs and feeding and watering troughs.
Fowl tick	10 ounces/gal.	Ventilate while spraying. Do not treat premises within 7 days of slaughter.
Lesser mealworms	33 ounces/gal.	Apply 25 ounces of spray mixture per 100 square feet of floor space or litter surface. Repeat as needed. Ventilate while spraying. Do not treat premises within 7 days of slaughter.

STORAGE AND DISPOSAL

STORAGE: Store unused product in original container only, in cool, dry area out of reach of children and animals, preferably in a locked storage area. Do not store in areas where temperatures frequently exceed 100°F.

After use, replace cap on insecticide container. Rinse hose end unit outdoors in clear water. Store insecticide and sprayer assembly in a cool place.

PESTICIDE DISPOSAL: Partially filled containers may be disposed of by securely wrapping original container in several layers of newspaper and discarding in trash. Do not contaminate water, food, or feed by storage or disposal. Discard unused pesticide spray mixture in a safe place away from water supplies.

CONTAINER DISPOSAL: Do not reuse empty container. Do not reuse hose and sprayer assembly for other purposes. Rinse thoroughly before discarding in trash. Securely wrap both in several layers of newspaper and discard in trash.

NOTE OF DISCLAIMER

NOTICE: Buyer shall be solely responsible for any and all injury, loss or damage which results from the use of this product in any manner which is inconsistent with the label directions, warnings or cautions.

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