

Pm 19 264-335

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File



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

MAR 17 1994

Larry R. Hodges  
RHONE-POULENC AG COMPANY  
P. O. Box 12014  
Research Triangle Park, NC 27709

**OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES**

**Subject: Label Amendment Submission of 07/22/93 in Response to PR Notice 93-7  
EPA Reg. No. 264-335  
SEVIN BRAND SL CARBARYL INSECTICIDE**

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

**WHAT THIS ACCEPTANCE MEANS:**

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

**WHAT YOU NEED TO DO NEXT:**

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



**Recycled/Recyclable**  
Printed with Soy/Canola Ink on paper that  
contains at least 50% recycled fiber

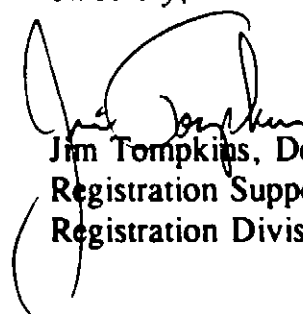
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs (7505C)  
U.S. Environmental Protection Agency  
401 M Street, SW  
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief  
Registration Support Branch  
Registration Division (7505W)

Attachment

LARRY R. HODGES  
RHONE-POULENC AG COMPANY.

Comments for: EPA REG. NO. 264-335  
SEVIN BRAND SL CARBARYL INSECTICIDE

The following specific comments pertain to your WPS labeling submission concerning the product cited above:

Move the statement "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." from its current position in the Agricultural Use Box to the "Directions for Use"

The bodywear requirement for early entry in the Agricultural Use Requirements Box on your proposed labeling should be "Coveralls". Remove the current "long-sleeved shirt and long pants" and replace it with "Coveralls".

You may retain the statement "Keep unprotected persons out of treated areas until sprays have dried" or change it to the exact wording on your current labeling "Do not enter treated areas without protective clothing until sprays have dried".

Delete the crossed out statements on your proposed label. They are redundant statements or phrases.

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# SEVIN® brand SL Carbaryl Insecticide

For Agricultural and Commercial Use Only

**ACTIVE INGREDIENT:**

Carbaryl (1-naphthyl N-methylcarbamate).....41.2% by wt.

**INERT INGREDIENTS:**.....58.8% by wt.

(Contains 4 Pounds Carbaryl Per Gallon)

EPA Reg. No. 264-335

EPA Est. No. 264-MO-02

## KEEP OUT OF REACH OF CHILDREN CAUTION

For **EMERGENCY** Information **ONLY** Call 24 Hours A Day 1-800-334-7577.

### STATEMENT OF PRACTICAL TREATMENT

Carbaryl is an N-Methyl Carbamate Insecticide.

#### GENERAL

Contact a physician immediately in all cases of suspected poisoning. Transport to a physician or hospital immediately and **SHOW A COPY OF THIS LABEL TO THE PHYSICIAN.** If poisoning is suspected in animals, contact a veterinarian.

**IF SWALLOWED:** Never give anything by mouth to an unconscious or convulsing person. If conscious and not convulsing, drink 1 to 2 glasses of water and induce vomiting by touching the back of the throat with finger.

**IF IN EYES:** Flush eyes with plenty of water. Get medical attention if irritation persists.

**IF ON SKIN:** Wash thoroughly with soap and water.

**IF INHALED:** Move from contaminated atmosphere and call a physician.

#### ANTIDOTE STATEMENT

**ATROPINE SULFATE IS HIGHLY EFFECTIVE AS AN ANTIDOTE.** Narcotics and other sedatives should not be used. Further, drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended. See NOTE TO PHYSICIAN below.

#### NOTE TO PHYSICIAN

Carbaryl is an N-methyl carbamate insecticide, which is a cholinesterase inhibitor. Overexposure to this substance may cause toxic signs and symptoms due to stimulation of the cholinergic nervous system. These effects of overexposure are spontaneously and rapidly reversible.

Gastric lavage may be used if this product has been swallowed. Carbaryl poisoning may occur rapidly after ingestion and prompt removal of stomach contents is indicated.

Specific treatment consists of parenteral atropine sulfate. Caution should be maintained to prevent overatropinization. Mild cases may be given 1 to 2 mg intramuscularly every 10 minutes until full atropinization has been achieved and repeated thereafter whenever symptoms reappear. Severe cases should be given 2 to 4 mg intravenously every 10 minutes until fully atropinized, then intramuscularly every 30 to 60 minutes as needed to maintain the effect for at least 12 hours. Dosages for children should be appropriately reduced. Complete recovery from overexposure is to be expected within 24 hours.

Narcotics and other sedatives should not be used. Further, drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended.

To aid in confirmation of a diagnosis, urine samples should be obtained within 24 hours of exposure and immediately frozen. Consultation on diagnosis, therapy and analysis can be obtained at all hours by calling the Rhone-Poulenc emergency number 1-800-334-7577.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS (& DOMESTIC ANIMALS)

##### CAUTION

**MAY BE HARMFUL IF SWALLOWED.** Avoid breathing spray mist. Do not take internally. Avoid contact with eyes, skin or clothing. Keep out of reach of children and domestic animals.

**OVEREXPOSURE MAY CAUSE:** Salivation, watery eyes, pinpoint eye pupils, blurred vision, muscle tremors, difficult breathing, excessive sweating, abdominal cramps, nausea, vomiting, diarrhea, weakness, headache. **IN SEVERE CASES CONVULSION, UNCONSCIOUSNESS AND RESPIRATORY FAILURE MAY OCCUR. SIGNS AND SYMPTOMS OCCUR RAPIDLY FOLLOWING OVEREXPOSURE TO THIS PRODUCT.**

with COMMENTS  
In EPA Letter Dated

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

564-335

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**PERSONAL PROTECTIVE EQUIPMENT:**

Applicators and other handlers must wear long-sleeved shirt and long pants; chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC), or viton; shoes plus socks; and chemical-resistant headgear for overhead exposure.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining Personal Protective Equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft 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.

**User Safety Recommendations**

Users should wash hands before eating, drinking chewing gum, using tobacco, or using the toilet.  
Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**ENVIRONMENTAL HAZARDS**

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

**BEE CAUTION: MAY KILL HONEYBEES IN SUBSTANTIAL NUMBERS.**

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging in the treatment area. Contact your Cooperative Agricultural Extension Service for further information.

**DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.  
Read the entire label before using this product. Strictly observe label directions and cautions.  
Do not use on any crop not listed on this label or supplemental labeling as any residues remaining may be illegal or harmful.  
For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

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 long-sleeved shirt and long pants; chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC), or viton; shoes plus socks; and chemical-resistant headgear for overhead exposure.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

Keep unprotected persons out of treated areas until sprays have dried.

## STORAGE AND DISPOSAL

### STORAGE

Store unused product in original container only, in cool, dry area out of reach of children and animals. Do not store in areas where temperatures frequently exceed 100°F. This product may be used following exposure to several freeze-thaw cycles.

If container is damaged, before cleaning up, put on Personal Protective Equipment.

### PESTICIDE DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

### CONTAINER DISPOSAL

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If container is burned, stay out of smoke.

### GENERAL INFORMATION

SEVIN® brand SL Carbaryl Insecticide is a suspension of microfine SEVIN® brand Carbaryl Insecticide in an aqueous medium. It readily disperses in water to form a spray which may be applied with hand or power-operated sprayers.

### PREHARVEST AND GRAZING USE INFORMATION AND LIMITATIONS

Tolerances established under the Federal Food, Drug and Cosmetic Act permit the sale of crops bearing probable carbaryl residues when this product is used in accordance with the label directions. If used as directed, treated forage may be grazed or used as feed for dairy and meat animals without causing illegal residues in meat or milk. This product may be applied up to and including the day of harvest or grazing of forage crops (except alfalfa). Application may be made without removing livestock from area being treated. Do not apply at greater rates or at more frequent intervals than are stated on the label. To do so may result in illegal residues in crops, meat, and milk.

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

Do not use reclaimed irrigation water from crops treated with carbaryl on crops for which carbaryl tolerances are not established.

### PLANT RESPONSE PRECAUTIONS

To avoid possible injury to tender foliage, do not apply to wet foliage or during periods of high humidity.

Do not use on Boston ivy, Virginia creeper and maidenhair fern as injury may result. Carbaryl may also injure Virginia and sand pines.

Carefully observe label instructions for apple thinning to avoid excessive thinning. Combinations with certain herbicides on ice and soybeans may be phytotoxic. Refer to specific directions for appropriate crop.

### SPRAY PREPARATION

TO ASSURE A UNIFORM SUSPENSION, AGITATE, STIR OR RECIRCULATE ALL CONTAINERS OF THIS PRODUCT PRIOR TO USE. Remove oil, rust, scale, pesticide residues and other foreign matter from mix tanks and entire spray system. Flush with clean water. Fill spray or mix tank with 1/2 to 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of SEVIN® brand SL Carbaryl Insecticide, and then add the remaining volume of water. Include rinse water from container. Prepare only as much spray mixture as can be applied on the day of mixing. MAINTAIN CONTINUOUS AGITATION DURING MIXING AND APPLICATION TO ASSURE A UNIFORM SUSPENSION. DO NOT STORE SPRAY MIXTURE FOR PROLONGED PERIODS OR DEGRADATION OF CARBARYL MAY OCCUR. Local water conditions may also accelerate the degradation of spray mixtures containing carbaryl. See COMPATIBILITY STATEMENT below.

### COMPATIBILITY

SEVIN® brand SL Carbaryl Insecticide, when diluted with at least an equal volume of water, is compatible with a wide range of pesticides. It is not compatible with diesel fuel, kerosene, fuel oil or aromatic solvents. If compatibility with another product and the resulting crop response is unknown, the mixture should be tested on a small scale. Curdling, precipitation, greasing, layer formation or increased viscosity are symptoms of incompatibility. Incompatibility will reduce insect control and may cause application and handling difficulties or plant injury. Observe all cautions and limitations on labeling of all products used in mixtures. WHEN PREPARING COMBINATION SPRAYS, FIRST ADD SEVIN® BRAND SL CARBARYL INSECTICIDE TO AT LEAST AN EQUAL VOLUME OF WATER, MIX THOROUGHLY, AND THEN ADD COMBINATION PRODUCTS TO THE MIXTURE. DO NOT APPLY TANK MIX COMBINATIONS UNLESS YOUR PREVIOUS EXPERIENCE INDICATES THE MIXTURE IS EFFECTIVE AND WILL NOT RESULT IN APPLICATION PROBLEMS OR PLANT INJURY.

Carbaryl is unstable under highly alkaline conditions and mixtures with strong bases, such as Bordeaux, lime-sulfur and casein-lime spreaders, will result in chemical degradation of the insecticide. Do not use this product in water with pH values above 8.0 unless a buffer is added. If necessary, water should be buffered to neutral (pH = 7.0) before adding this product to the spray tank. Overhead irrigation with alkaline or muddy water after application will also accelerate chemical degradation and may result in reduced insect control.

### APPLICATION

For all applications use sufficient gallonage to obtain thorough and uniform coverage. Observe label instructions for specific directions regarding spray volume where they occur. Calibrate spray equipment to deliver the required volume. Use 50 mesh slotted strainers in spray system and 25 mesh slotted strainers behind nozzles.

To clean spray system after use, drain and flush with a water and detergent mixture. Rinse thoroughly with clean water. Refer to the Storage and Disposal directions for disposal instructions.

## INSECT CONTROL

Begin application when insect populations reach recognized economic threshold levels. Consult the Cooperative Extension Service, professional consultants or other qualified authorities to determine appropriate threshold levels for treatment in your area. To maintain control repeat at 7 to 14 day intervals or as necessary unless a shorter interval is specified below. Where a dosage range is indicated, use the lower rate on light to moderate infestations, young plants and early instars and the higher rate on heavy infestations, mature plants, advanced instars and adults. Thorough and uniform spray coverage is essential for effective control.

**NOTE:** All references to armyworm on the crops listed below refer to the species, *Pseudaletia unipuncta*, often called the "true armyworm". Except where indicated otherwise, this product is not registered for the control of other armyworm species. Regional differences have been noted in the susceptibility of certain strains of fall armyworm, Colorado potato beetle, spotted tentiform leafminer, and tobacco budworm (on cotton) to carbaryl. If local experience indicates inadequate control, use an alternative pesticide.

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**FORAGE, FIELD AND VEGETABLE CROPS**

Apply in sufficient spray volume to obtain thorough coverage. To prepare small volumes of spray mixture use 1 tablespoonful (1/2 fluid ounce) of SEVIN® brand SL Carbaryl Insecticide per gallon of water where rates of 1 quart per acre or 1 quart per 100 gallons are indicated in the tables below.

**GRASSHOPPERS**

CROP	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
All Forage, Field and Vegetable Crops on this label	1/2 to 1 1/2 (unless noted otherwise)	See specific Forage, Field or Vegetable Crops	Use 1/2 to 3/4 quart for nymphs on small plants or sparse vegetation in wasteland, rangeland, ditchbanks and borders. Use 1 to 1 1/2 quarts for mature grasshoppers or applications to dense vegetation or if extended residual control is desired. Be certain spray volumes are appropriate to assure adequate coverage.

CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Alfalfa Clovers Birdsfoot trefoil (DO NOT USE ON BIRDSFOOT TREFOIL IN CALIFORNIA)	Blister beetles Mexican bean beetle	1/2 to 1	0 (clovers, birdsfoot trefoil)	OBSERVE BEE CAUTION Observe plant response precautions
	Alfalfa caterpillar Bean leaf beetle Cucumber beetles Green cloverworm Japanese beetle Leafhoppers Potato leafhopper Three cornered alfalfa hopper Thrips Velvetbean caterpillar	1	7 (alfalfa)	Carbaryl may cause a temporary bleaching of tender alfalfa foliage.
	Grasshoppers			Refer to general GRASSHOPPER heading above.
	Alfalfa blotch leafminer Armyworm Cloverhead weevil Corn earworm Cutworms Egyptian alfalfa weevil larvae Essex skipper European alfalfa beetle Fall armyworm Lygus bugs Stink bugs Webworms Yellowstriped armyworms	1 to 1 1/2		On dense growth use 20 to 40 gallons per acre with ground equipment to ensure adequate coverage.
	Alfalfa weevil larvae West of the Rocky Mountains	1 to 1 1/2		For alfalfa weevil larvae, if pretreatment damage is extensive, cut alfalfa and treat the stubble.
	East of the Rocky Mountains	1 1/2		
	Asparagus	Asparagus beetle	1 to 2	1
Apache cicada Asparagus beetle		2 to 4	Post harvest application only	



CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS	
Beans (including blackeyed peas, cowpeas, southern peas, dry beans, green beans, lima beans, navy beans and snap beans) Lentils (DO NOT USE ON LENTILS IN CALIFORNIA)	Blister beetles Mexican bean beetle	1/2 to 1	0 (except cowpeas and lentils)	Observe plant response precautions.	
	Alfalfa caterpillar Bean leaf beetles Cucumber beetles Flea beetles Green cloverworm Japanese beetle Leafhoppers Three cornered alfalfa hopper Thrips Velvetbean caterpillar Western bean cutworm	1	3 (cowpeas) 7 (lentils)		
	Grasshoppers				Refer to general GRASSHOPPER heading above.
	Armyworm Corn earworm Cutworms European corn borer Fall armyworm Stink bugs Tarnished plant bug Webworms	1 to 1 1/2			CALIFORNIA ONLY
	Alfalfa Looper	1 1/2			
	Cowpea curculio	2			
	Corn earworm Limabean podborer Lygus bugs Stink bugs	2			
Cabbage Broccoli Brussels sprouts Cauliflower Kohlrabi	Flea beetles Harlequin bug	1/2 to 1	3		
Armyworm Corn earworm Diamondback moth Fall armyworm Imported cabbageworm	1 to 2				
Chinese cabbage Collards Hanover salad Horseradish Kale Mustard greens Radishes Rutabagas Turnips	Flea beetles Harlequin bug Leafhoppers	1/2 to 1	3 (horseradish, radishes, rutabagas and turnip roots)		
Aster Leafhopper	1 to 1 1/2				
Armyworm Corn earworm Fall armyworm Imported cabbageworm Stink bugs Tarnished plant bug	1 to 2	14 (Chinese cabbage, collards, Hanover salad, kale, mustard greens, and turnip tops)			
Carrots Celery Parsley Parsnips (DO NOT USE ON CELERY IN CALIFORNIA)	Flea beetles Leafhoppers	1/2 to 1	0 (carrots)	Treat on a 5 to 7 day schedule.	
	Aster leafhopper Lygus bugs Spittlebugs	1 to 1 1/2	3 (parsnips)		
	Armyworm Corn earworm Fall armyworm Stink bugs Tarnished plant bug	1 to 2	14 (celery & parsley)		

CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Corn (field, sweet, pop)	Armyworm Chinch bugs Corn earworm Corn rootworm adults Fall armyworm Flea beetles Japanese beetle Sap beetles Southwestern corn borer Leafhoppers	1 to 2	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. For optimum chinch bug control, apply at least 20 gallons of water per acre by ground and direct spray toward stalk to provide thorough coverage.
	Grasshoppers			Refer to general GRASSHOPPER heading above.
	European corn borer	1 1/2 to 2		For optimum control, do not apply in less than 3 gallons of water per acre by air and 15 gallons of water per acre by ground.
	Western bean cutworm	2		
	Cutworms	2 to 3		For optimum control, apply in a 23 inch band, over the row, using sufficient volume of water to obtain thorough coverage. For broadcast application use at least 20 gallons (ground) or 5 gallons (air) of water per acre.
Cotton	Cotton fleahopper Cotton leafworm Flea beetles Striped blister beetle Thrips	1/2 to 1	7	
	Boll weevil Cotton bollworm Fall armyworm Leafrollers Leafhoppers Tarnished plant bug Yellowstriped armyworm (cotton cutworm)	1 to 2		Treat on a 5 to 7 day schedule for as long as control is necessary. Mid and late season insect control. May be applied after bolls open.
	Lygus bugs	1 to 2		For light to moderate populations in Western irrigated cotton.
	Pink bollworm	1 1/2 to 2 1/2		Aphid populations will be suppressed by repeated applications of this insecticide.
	Cutworms Stink bugs Saltmarsh caterpillar	2		
Cucumber Melons Pumpkin Squash	Pickleworm Melonworm	1/2 to 1	0	Observe plant response precautions.
	Cucumber beetles Flea beetles Leafhoppers Squash bugs	1		
Dandelion Endive (Escarole) Lettuce Salsify	Flea beetles Halequin bug Leafhoppers	1/2 to 1	3 (head lettuce & salsify roots)	Observe plant response precautions. Treat on a 5 to 7 day schedule after heads begin to form.
	Aster Leafhopper Spittlebugs Lygus bugs	1 to 1 1/2	14 (dandelion, endive)	
	Armyworm Corn earworm Fall armyworm Imported cabbageworm Stink bugs Tarnished plant bug	1 to 2	(escarole), leaf lettuce & salsify tops)	

CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Flax Proso Millet (DO NOT USE IN CALIFORNIA)	Amyworm	1 to 1 1/2	42	Do not graze treated areas or harvest for dairy feed prior to crop maturity.
	Grasshopper			Refer to general GRASSHOPPER heading above.
Garden beet Spinach Swiss chard	Flea beetles Harlequin bug Leafhoppers	1/2 to 1	3 (garden beet roots)	Treat on a 5 to 7 day schedule.
	Aster leafhopper	1 to 1 1/2	14 (garden beet tops, spinach, Swiss chard)	
	Amyworm Corn earworm Fall armyworm Stink bugs Tarnished plant bug	1 to 2		
Okra	Corn earworm Stink bugs	1 to 2	0	Treat on a 5 to 7 day schedule.
Pasture	Amyworm Black grass bugs Chinch bugs Essex skipper Fall armyworm Range caterpillar Range crane fly Striped grass looper Thrips	1 to 1 1/2	0 (aerial applications)  14 (ground applications)	To control thrips in grasses grown for seed, use high spray pressure to improve penetration into boot.  Apply a minimum of 2 applications per year. Allow at least 14 days between applications.  Do not allow foraging or cut for hay within 14 days of last application by ground. Aerially treated pastures may be grazed or cut for hay on day of treatment.  Carefully mark swath to avoid over-application.
	Grasshoppers			Refer to the general GRASSHOPPER heading above.
Peanuts	Blister beetles Mexican bean beetle	1/2 to 1	0	Observe plant response precautions.
	Alfalfa caterpillar Bean leaf beetle Cucumber beetles Green cloverworm Japanese beetle Leafhoppers Rednecked peanutworm Three cornered alfalfa hopper Thrips Velvetbean caterpillar	1		
	Amyworm Corn earworm Fall armyworm Stink bugs Webworms	1 to 1 1/2		
	Whitefringed beetle adults Cutworms	2		

CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Peas	Colorado potato beetle Leafhoppers	1	3	
	Amyworm	1 to 1 1/2		
	Alfalfa caterpillar Cutworms Pea leaf weevil Pea weevil Yellowstriped armyworm	1 1/2		
	Alfalfa looper	2 1/2		
Potato Tomato Eggplant Pepper	Colorado potato beetle Flea beetles Leafhoppers	1/2 to 1	0	Thorough coverage is essential to effectively suppress stink bugs. When disease transmission is suspected, monitor fields following application and re-treat if reinfestation occurs.
	European corn borer Fall armyworm Lace bugs Stink bugs (suppression) Tarnished plant bug Tomato fruitworm Tomato hornworm Tomato pinworm	1 to 2		
	Cutworms	2		
Prickly Pear Cactus	Cochineal scale (crawlers)	2	1	Apply as needed at 7-10 day intervals. Do not make more than 7 applications per season.
Rangeland	Black grass bug Mormon cricket Range caterpillars Range crane fly	1/2 to 3/4	0	FOR AERIAL APPLICATIONS ONLY. Apply a maximum of 2 applications per year. Allow at least 14 days between applications. Carefully mark swaths to avoid over-application.
	Grasshoppers			Refer to the general GRASSHOPPER heading above.
Rice	Amyworm Chinch bugs Fall armyworm Stink bugs	1 to 1 1/2	14	MISSISSIPPI DELTA & TEXAS. CAUTION: May kill shrimp and crabs. Do not use in areas where these are important resources. Do not use on rice fields in which crayfish and catfish farming are included in the cultural practice. DO NOT APPLY PROPANIL HERBICIDES WITHIN 15 DAYS BEFORE OR AFTER APPLICATION OF THIS PRODUCT OR PLANT INJURY WILL RESULT.
	Grasshoppers			Refer to the general GRASSHOPPER heading above.
	Amyworm Leafhoppers Tadpole shrimp	2		CALIFORNIA ONLY For optimum tadpole shrimp control, apply to water when pest first appears.

CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Sorghum (milo, grain sweet and hybrid)	Sorghum midge	3/4 to 1	21	Direct spray into forming heads for optimum insect control. Treat for sorghum midge when 25 to 30 percent of heads have emerged from boot and are in bloom. Repeat application 3 to 5 days later if adults are still active. A third application may be necessary in late planted sorghum or if midge are abundant. For chinch bugs use high gallonage ground application directed at the base of plants.  This product will not effectively control the Southern green stink bug.  Refer to the general GRASSHOPPER heading above.
	Armyworm Chinch bugs Corn earworm Fall armyworm Stink bugs Webworms	1 to 2	(grain) 0 (forage)	
	Southwestern corn borer	1 1/2		
	Cutworms	2		
	Grasshoppers			
Soybeans	Bean leaf beetle Blister beetle Cucumber beetles Grape colaspis Green cloverworm Japanese beetle Mexican bean beetle Velvetbean caterpillar	1/2 to 1	0	DO NOT APPLY A COMBINATION OF THIS PRODUCT AND 2,4 DB HERBICIDES TO SOYBEANS AS CROP INJURY MAY RESULT. Use lower rates for light to moderate populations and smaller instars and to provide maximum survival of beneficial insects and spiders. Use the higher rates for heavy populations and larger instars.
	Corn earworm	1/2 to 1 1/2		Refer to general GRASSHOPPER heading above.
	Grasshoppers			
	Alfalfa caterpillar Leafhoppers Three cornered alfalfa hopper Thrips	1		
	Armyworm Cutworms Fall armyworm Webworms	1 to 1 1/2		
	Painted lady (Thistle caterpillar) Saltmarsh caterpillar Woollybear caterpillar Yellowstriped armyworm	1 1/2 to 2		
Sugar beets	Armyworm Beet leaf beetle Fall armyworm Flea beetles Leafhoppers Webworms	1 to 1 1/2	14	
	Grasshoppers			Refer to general GRASSHOPPER heading above.
	Cutworms	1 1/2		

CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Sunflower (DO NOT USE IN CALIFORNIA)	Cutworms	1 1/2	60	Refer to general GRASSHOPPER heading above.
	Amyworm Fall armyworm Sunflower moth	1 1/2 to 2		
	Stem weevil Sunflower beetle	1 to 2		
	Grasshopper			
Sweet Potato (DO NOT USE IN CALIFORNIA)	Com earworm Cucumber beetles Flea beetles Sweet potato hornworm Tortoise beetles	1 to 2	0	Apply as a foliar spray as needed.  Full coverage of plants is essential. Use lower rate on young plants and higher rate on mature plants.
	Yellowstriped armyworm	2		
	Sweet Potato weevil	1 to 2		
Tobacco Plant bed Treatment	Flea beetle	1	0	OBSERVE PLANT RESPONSE PRECAUTIONS. For flea beetle control, use 4 teaspoons (0.7 fl. oz.) in 6 gallons of water and apply to 100 square yards.  For green June beetle grub control mix 11 tablespoons (5.5 fl. oz.) in 50 to 100 gallons of water and apply to 100 square yards. Applications should be made to areas that larvae have uprooted by sprinkling mixture as a drench treatment.
	Green June beetle grubs	8		
Field Treatment	Budworms Fall armyworm Flea beetles Hornworms Japanese beetle June beetle Suckfly	1 to 2		Use lower rate on young plants (up to knee height). Use at least 10 gallons of prepared spray per acre. Begin treatments when worms are small.
Wasteland, Rights-of-Way, Hedgerows, Ditchbanks, Roadsides	Black grass bug Mormon cricket Range caterpillars Range crane fly	1/2 to 1	0 (aerial applications)  14 (ground applications)	Apply a maximum of 2 applications per year. Allow at least 14 days between applications. Do not allow foraging or cut for hay within 14 days of last application by ground. Aerially treated areas may be grazed or cut for hay on day of treatment. Carefully mark swaths to avoid over-application.
	Grasshoppers			Refer to the general GRASSHOPPER heading above.
Wheat (including triticale) (DO NOT USE IN CALIFORNIA)	Flea beetles	1/2 to 1	0 (forage)  21 (grain)	Refer to the general GRASSHOPPER heading above.  Application is effective against eggs, larvae and adult of the cereal leaf beetle.
	Grasshoppers			
	Cereal leaf beetle	1		
	Armyworm Fall armyworm	1 to 1 1/2		

**TREE FRUIT AND NUT CROPS**

Apply the recommended amount of SEVIN® brand SL Carbaryl Insecticide in 100 gallons of water. Use hand or power-operated sprayer to wet leaves and branches to the dripping point.

**APPLE THINNING**

CROP	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Apples	1/4 to 1/2	1	<p>OBSERVE BEE CAUTION.</p> <p>Apply 1 full coverage dilute spray between 10 and 25 days after full bloom. Factors such as tree age, variety, nutrition, previous crop, pruning, bloom and degree of set favor excessive fruit thinning with the product. Exercise caution to avoid possible yield reduction. Rates may vary depending on variety and local orchard conditions.</p> <p>Consult with your County Extensions Service or other experts for advice on the proper use of this product.</p> <p>In Eastern apple growing areas, tank mix combinations of Carbaryl and Naphthaleneacetic Acid (NAA) or Naphthaleneacetamide (NAD) have successfully thinned several early-maturing, heavy-setting varieties, as well as hard-to-thin varieties such as Golden Delicious and Rhode Island Greening. The higher rate of Carbaryl and reduced rates of NAA or NAD followed 7 to 10 days later by an application of Carbaryl has improved thinning on these varieties.</p> <p>For easily thinned varieties including Cortland, Grimes, Jonathan, McIntosh, Orleans, Rome Beauty, Puritan, Red Delicious, Winesap, Yellow Newton.</p>
	1/2 to 1	1	<p>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.</p>

CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Almond	Fruittree leafroller Peach twig borer San Jose scale	1	28	<p>OBSERVE BEE CAUTION</p> <p>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.</p>
	Naval orangeworm			<p>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.</p>
Avocados (FOR CALIFORNIA USE ONLY)	Gypsy moth Japanese beetle	1	1	<p>FOR USE IN JAPANESE BEETLE AND GYPSY MOTH ERADICATION PROGRAMS IN CALIFORNIA ONLY.</p> <p>Use with ground equipment and spray to run off. Apply when insects or their damage appear.</p> <p>Do not make more than 1 application per season.</p>

CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
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)	1	5	OBSERVE BEE CAUTION To insure thorough coverage, 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	3/4 to 1		
Filbert	Filbert aphid Filbert leafroller Filbertworm	1	0	Apply when leafroller eggs are hatching. Repeat on first appearance of adult filbert moths and again 3 to 4 weeks later. Apply dilute sprays in 300-400 gallons per acre.
Olives	Olive scale	3/4 to 1	0	For optimum scale control add 1 1/2 gallons of summer oil and apply mixture when crawlers are present. Do not exceed 2 applications per year.
Peaches Apricots Nectarines	Apple pandemis Codling moth Cucumber beetles European earwig Fruittree leafroller Gypsy moth Japanese beetle June beetles Lecanium scales Lesser peachtree borer Olive scale Orange tortris Oriental fruit moth Peach twig borer Periodical cicada Plum curculio Redbanded leafroller San Jose scale Tarnished plant bug Tussock moths Variegated leafroller	1	1 (peaches) 3 (apricots & nectarines)	For optimum scale control apply when crawlers are present. For lesser peachtree borer control, spray limbs and trunk thoroughly at weekly intervals during moth flight.
Pecans	Black margined aphid Fall webworm Hickory shuckworm Lesser webworm Pecan leaf Phylloxera Pecan nut casebearer Pecan stem phylloxera Pecan spittlebug Pecan weevil Twig girdler Walnut caterpillar	1 to 2 1/2	0	
Pistachios	Navel Orangeworm	1 to 2	14	Apply dilute volumes of 150 to 300 gallons of mixed spray per acre for full coverage at onset of hull split.



CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Plums Prunes Cherries	Codling moth Eastern tent caterpillar Orange tortrix Tussock moth	3/4		
	Black cherry aphid Brown soft scale Cherry fruitworm Cherry maggot European earwig Eyespotted bud moth Forbes scale Fruittree leafroller Green fruitworm Gypsy moth Japanese beetle Lecanium scales Lesser peachtree borer Mealy plum aphid Oystershell scale Peach twig borer Plum curculio Prune leafhopper Redbanded leafroller Rose chafer San Jose scale Variegated leafroller	1	1	For optimum scale control apply when crawlers are present. For lesser peachtree borer controls spray limbs and tree trunks thoroughly at weekly intervals during moth flight.
Pomefruit (including apples, pears, loquats, crabapples, oriental pears and quince)	Apple aphid Apple maggot Apple rust mite Apple sucker Bagworms California pearslug (pear sawfly) Eastern tent caterpillar European apple sawfly Eyespotted bud moth Forbes scale Fruittree leafroller Green fruitworm Gypsy moth Lecanium scales Lesser appleworm Lygus bugs Orange tortrix Oystershell scale Pearleaf blister mite Pear psylla Pear rust mite Periodical cicada Plum curculio Redbanded leafroller Rosy apple aphid San Jose scale Tarnished plant bug Tentiform leafminers Wooly apple aphid Yellowheaded fireworm	3/4 to 1	1	OBSERVE BEE CAUTION 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. To control scale insects, apply when crawlers are present.
	Apptly mealybug Apple aphid Codling moth White apple leafhopper	1/2		
	Japanese beetle	3/4		Apply as needed with ground equipment at 7 to 14 day intervals.

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CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Walnut	Calico scale Codling moth European fruit lecanium Filbertworm Fruitree leafroller Frosted scale	1/2	0	For codling moth apply first spray when average cross-sectional diameters of developing nuts are 1/2 to 3/4 inch. Repeat during middle or late June as needed.
	Navel Orangeworm	1		For navel orangeworm, time application to coincide with peak egg laying activity at time of or following hull split.
	European earwig	2		Spray tree trunks to point of run-off.

**SMALL FRUIT CROPS**

Recommended dosages refer to quarts of SEVIN® brand SL Carbaryl Insecticide per acre. The optimum spray gallonage will depend on plant size, density and stage of growth. Typical spray gallonage per acre range from 100-300 gallons for dilute sprays, 30-100 gallons for concentrate sprays and 5-25 gallons for aerial sprays. Do not exceed maximum label rate per acre per application.

CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Blackberries Raspberries Dewberries (including boysenberries and loganberries)	European raspberry aphid Japanese beetle Leafhoppers Leafrollers Rose chafer Snowy tree cricket	1 to 2	7	CALIFORNIA ONLY
	Omnivorous leafroller Raspberry sawfly	2		
Blueberries	Blueberry maggot Cherry fruitworm Cranberry fruitworm European fruit lecanium Japanese beetle	1 1/2 to 2	0	Apply 3 weeks before harvest and repeat as necessary.
Cranberries	Cutworms Cranberry fireworms Cranberry fruitworms Cranberry twig girdler Elm spanworm Japanese beetle Leafhoppers Rose chafer Spaganothus worm	1 1/2 to 3	1	CAUTION: May kill s'rimp and crabs. Do not use in areas where these are important resources. Apply in late bloom and as needed at 7 to 10 day intervals.
Grapes	European fruit lecanium Grape leafroller Grape leafhopper Western grapeleaf skeletonizer Western yellowstriped armyworm	1 to 2	7	Apply before first brood leafroller larvae emerge from rolls.
	Cutworms Eight-spotted forester Grape berry moth Japanese beetles June beetles Orange tortrix Omnivorous leafroller Redbanded leafroller Saltmarsh caterpillar	2		

CROP	INSECT	QUARTS OF SEVIN® BRAND SL/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Strawberries	Flea beetles Meadow spittlebug (strawberry fruitworm) Omnivorous leaf-tier Strawberry clipper Strawberry bud weevil Strawberry leafroller Strawberry weevil	1 to 2	1	Carbaryl may injure Early Dawn and Sunrise varieties.

**TREES AND ORNAMENTALS**

For control of certain insects on trees, ornamentals, woody plants and shrubs, apply the recommended amount of SEVIN® brand SL Carbaryl Insecticide in 100 gallons of water. Use hand or power-operated sprayer to wet leaves and twigs to the dripping point. Do not use on Boston ivy, Virginia creeper and maidenhair fern. During early season it may also injure Virginia and sand pines.

INSECT	AMOUNT OF SEVIN® BRAND SL TO PREPARE		SPECIFIC DIRECTIONS	
	3 GAL.	100 GAL		
Ants Apple aphid Armyworm Azalea leafminer Bagworms Birch leafminer Blister beetle Boxelder bug Boxwood leafminer Browntail moth Cankerworms Catalpa sphinx Chiggers Cutworms Cypress tip moth Eastern spruce gall adelgid Elm leaf aphid Elm leaf beetle Elm spanworm Eriophyid mites European pine shoot moth Fall armyworm Flea beetles Fuchsia gall mite Fuller rose beetle Gall midges Gall wasps Greenstriped mapleworm Grasshoppers	Gypsy moth Hackberry nipplegall maker Holly bud moth Holly leafminer 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 Oak moth Oakworm complex Oleander caterpillar Olive ash borer Orangestriped oakworm Orange tortrix Periodical cicada Pine looper 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 caterpillars Springtails Spruce needleminer Subtropical pine tip moth Tent caterpillar Thrips (exposed) Ticks Tree hoppers Walnut caterpillar Webworms Western hemlock looper Willow leaf beetles Yellow poplar weevil	1 oz. 1 qt.	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 when in early instars. Addition of a sticker may improve residual control. Applications for control of maple leafcutter on sugar maple should be made when larvae are in 2nd instar after mining and as cases are being formed.
Balsam twig aphid Cooley spruce gall adelgid	Douglas-fir tussock moth Spruce budworm	Western spruce budworm	1 to 2 ozs 1 to 2 qts	Use the higher rate when large larvae or heavy populations are present.
Ips engraver beetles Mountain pine beetle	Roundheaded pine beetle Spruce beetle	Western pine beetle	1 pt 16 qts	Effective for beetle control or as a protective treatment. Apply 1 gallon of spray per 50 square ft. of bark prior to beetle flight or host-tree attack. Treat tree trunks from ground level up, until trunk diameter is less than 5 inches. Repeat treatments as needed.
Elm bark beetle				Apply approximately 20-30 gallons of spray mixture for each 50 feet of elm tree for thorough coverage of all bark surfaces on trunks, limbs and twigs.

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**LAWNS AND RECREATIONAL AREAS**

For control of certain turfgrass pests, apply the recommended rates using hose end sprayers or pressure type equipment in sufficient spray volume for thorough coverage and turf thatch penetration. Where a dosage range is indicated, use the higher rate on large pest populations, advanced instars and dense vegetation. Repeat treatment as necessary.

SITE	INSECT		AMOUNT OF SEVIN® BRAND SL		SPECIFIC DIRECTIONS
			FL. OZ/ 1000 SQ. FT.	QUARTS/ ACRE	
Turf grasses	Ants Armyworm Centipedes Chiggers Cutworms Earwigs Essex skipper European chafer Fall armyworm Fiery skipper Grasshoppers Green June beetle grub	June beetles Leafhoppers Lucerne moth Millipedes Mosquitoes (adults) Sowbugs Spittlebugs Springtails Ticks Yellowstriped armyworm	1 1/2 to 3	2 to 4	For Armyworm, Cutworm and Fall Armyworm Control: Do not irrigate treated areas following insecticide application.  For Green June Beetle Grub Control: Make applications when grubs are feeding near the soil surface. Water or irrigate turf grasses soon after treatment.
	Chinch bugs Sod Webworm (lawn moths)		4.4 to 6	6 to 8	For Chinch Bug Control: Treat entire grass area rather than just damaged areas. Irrigation of turf grass area before treatment will aid in penetration of insecticide 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)		6	8	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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IMPORTED FIRE ANT CONTROL

SITE	AMOUNT OF SEVIN® BRAND SL/VOLUME OF WATER	SPECIFIC DIRECTIONS
Lawns Cemeteries Recreational Areas (including turf, golf courses, and parks) Pastures Rangeland Forested Lands Wasteland	1 1/2 quarts/100 gallons or 1 1/2 tablespoons/gallon	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 three feet to give sufficient force to break mound apex and flow into ant tunnels. For best results apply in cool weather, 65 – 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.
Nursery Stock Vegetable transplants Foliage Plants Bedding Plants	1 1/2 quarts/100 gallons	DO NOT USE ON ANY FOOD CROP NOT LISTED ON LABEL.  Do not make more than one application, either as a root-dip or a drench treatment (applied to the point of saturation). Avoid contact with foliage and treat only the growing media when using on bedding plants.

ADULT MOSQUITO CONTROL

For dilute-spray ground applications to trees (including shade trees, shelter belts, forests, plantations, parks and recreational areas), ornamentals, woody plants and shrubs, apply the specified dosage per 100 gallons of water. For concentrate-spray ground applications, apply the specified dosage per acre in sufficient spray volume to provide thorough coverage. To prepare small volumes of spray, use 1 tablespoon (1/2 fluid ounce) of SEVIN® brand SL Carbaryl Insecticide per gallon of water, where rates of 1 quart are indicated.

SITE	QUARTS OF SEVIN BRAND SL/100 GALS.	SPECIFIC DIRECTIONS
Pastures Rangelands Parks Recreational Areas Logging Camps Military Posts Adjacent Forested lands or Wastelands	1/4 to 1 (1/2 to 1 tbs per gallon)	<b>CAUTION:</b> May kill shrimp and crabs. Do not use in areas where these are important resources. <b>OBSERVE BEE CAUTION</b> Treat shrubbery and areas where adult mosquitoes congregate. Treat when adult mosquitoes are active in early mornings or late evenings. Repeat at 7 to 10 day intervals.  Use 1/4 to 1/2 quart per 100 gallons in mistblowers, and 1 quart per acre in aerial sprays and 1 quart per acre in low pressure ground sprayers.
	25	For residual control in subtropical regions apply 4 gallons of prepared spray per 2000 square feet of surface area. Repeat in 3 to 6 months or when necessary.

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**CONTROL OF TICKS WHICH VECTOR LYME DISEASE**

For control of juvenile and adult ticks which vector Lyme Disease, apply the recommended rate in sufficient volume for thorough coverage. To prepare small amounts, use 1 tablespoon (1/2 fluid ounce) of SEVIN® brand SL Carbaryl Insecticide per gallon of water.

1 Tablespoon=1/2 fluid ounce SEVIN® brand SL Carbaryl Insecticide

SITE	PEST	QUARTS OF SEVIN® SL PER ACRE	SPECIFIC DIRECTIONS
Lawns and Lawns and Recreational Turfgrass (Including: Lawns & Perimeters, Golf Courses, Sports Fields, Cemeteries, Parks, and Pastures) Shrubs, Ornamentals, Wooded Areas (Including: Military Posts, Logging camps, and Campsites) Wastelands	<i>Ixodes spp.</i> Deer tick, Bear tick, and Black legged tick  <i>Amblyomma spp.</i> Lone Star tick	1 to 2	Use the high rate for heavy tick infestation.  Use higher spray volumes for dense ground cover or heavy leaf litter and on lush turf with thatch buildup.  Target applications for nymphal control in late spring or early summer. Control of adult ticks can be achieved with late summer and fall applications.  Do not use spot treatments. Treat entire area and perimeter areas where exposure to ticks may occur.  Ticks may be reintroduced from surrounding areas on host animals. Retreat as necessary to maintain adequate control levels.

**POULTRY ROOSTS AND BUILDINGS ONLY**

SITE	QUARTS OF SEVIN BRAND SL/100 GALS.	SPECIFIC DIRECTIONS
Bed bugs Chicken mite Fleas Lice Northern fowl mite	4	<b>DO NOT TREAT POULTRY OR GAME BIRDS</b> Apply 1 to 2 gallons of spray mixture per 1000 square feet of wall, litter or roost surface. Force spray into cracks. Repeat as needed.  Avoid spraying nests, eggs and feeding and watering troughs.
Fowl tick	16	Ventilate while spraying. Do not treat premises within 7 days of slaughter.
Lesser mealworms	50	Apply 2 gallons of spray mixture per 1000 square feet of floor space or litter surface. Repeat as needed.  Ventilate while spraying. Do not treat premises within 7 days of slaughter.

**PEST CONTROL IN AND AROUND BUILDINGS**

**General Information**

**NOTE:** Staining may occur on certain surfaces such as stucco, brick, cinder block and wood. Therefore, applications of SEVIN® brand SL Carbaryl Insecticide to surfaces where a noticeable residue or discoloration is objectionable should be avoided. Do not apply to carpets or draperies as staining may occur. Care should also be exercised to avoid spotting of wallpaper and fabrics.

Do not use this product in commercial food areas of food handling establishments, restaurants or other places where food is prepared or processed. Do not use in serving areas while food is exposed.

**INDOORS**

**CRICKETS/FIREBRATS/SILVERFISH:** Mix 3.5 ozs. of this product per gallon of water and apply as fine, low pressure (20 psi) spot spray or as crack and crevice application to areas where these pests hide, such as baseboards, storage areas, closets, around water pipes, doors and windows, behind and under refrigerators, cabinets, sinks, stoves, dishwashers, hot water heaters, the underside of shelves, drawers and similar areas.

**BEEES and WASPS:** Mix 3.5 ozs. of this product per gallon of water and thoroughly spray nest and entrance and surrounding areas where insects alight. It is generally advisable to spray the nests in the evening when the insects are less active and have returned to the nest. For best results, check nest carefully one or two days after spraying to ensure complete kill, then remove and destroy nest to prevent emergence of newly hatched insects.

**BROWN DOG TICKS and FLEAS:** Mix 3.5 ozs. of this product per gallon of water and thoroughly spray infested areas such as nearby cracks and crevices, along and behind baseboards, window and door frames and other areas where these pests may be present.

**CARPENTER ANTS:** Mix 7.0 ozs. of this product per gallon of water and apply to ant trails, around doors and windows and other places where ants enter premises. Where possible, apply this product directly to ant nest or infested wood.

**CENTIPEDES/EARWIGS/MILLIPEDES/SCORPIONS:**

Mix 3.5 ozs. of SEVIN® brand SL Carbaryl Insecticide per gallon of water and apply around water pipes, doors and windows, and other places where these pests may enter premises. Spray baseboards, storage areas, garages, carports, basements and other areas where these pests are found.

**COCKROACHES:** Efficacy varies with species sensitivity. This product is generally not highly effective in controlling German cockroaches. However, the following may be controlled with the rates as stated. American roach, Australian roach, Brown roach, Smoky brown roach, and others. Mix 7.0 ozs. of this product per gallon of water and apply as a fine, low pressure (psi) spot spray or as crack and crevice application to areas where these pests hide, such as baseboards, storage areas, closets, around water pipes, doors and windows, behind and under refrigerators, cabinets, sinks, stoves, dishwashers, hot water heaters, the underside of shelves, drawers and similar areas.

**SPIDERS:** Mix 3.5 ozs. of this product per gallon of water and apply to infested baseboards, window and door frames, corners, pipes, storage areas, attics and under eaves. Make spot applications to other areas where these pests are present.

**OUTDOORS**

**PERIMETER TREATMENT:** Residual spray for control of ants, bees and wasps, brown dog ticks, carpenter ants, centipedes, cockroaches, crickets, earwigs, firebrats and silverfish, fleas, millipedes, scorpions and spiders. Mix 6.5 ozs. of this product per gallons of water and apply via power spray or other spray methods.

To help prevent infestations of buildings by the above pests, outside perimeter treatment should be in a band 6 to 10 feet wide and confined to shrub beds, foundation plantings and lawn or soil areas immediately adjacent to the structure. Direct application to structures should be minimal and restricted to cracks and crevices and other areas where insects tend to congregate.

**ANTS: SPECIFIC DIRECTIONS:** Mix 6.5 ozs. of this product per gallon of water and apply as fine, low pressure (20 psi) spot spray or as crack and crevice application to ant trails, around doors and windows, and other places where ants enter premises.

**DIRECTIONS FOR USE THROUGH SPRINKLER IRRIGATION SYSTEMS**

Apply this product only through sprinkler irrigation systems including center pivot and soil set. Do not apply this product through any other type of irrigation system.

**SPRAY PREPARATION:** Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water.

**APPLICATION INSTRUCTIONS:** First prepare a suspension of SEVIN® brand SL Carbaryl Insecticide in a mix tank. Fill tank with 1/2 to 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Add the required amount of SEVIN® brand SL Carbaryl Insecticide, and then the remaining volume of water. (Suspension concentrations using the appropriate dosage per acre recommended on this label of SEVIN® brand SL per 1 to 4 gallons of water are recommended) Then set sprinkler to deliver 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the suspension of SEVIN® brand SL into the irrigation water line so as to deliver the desired rate per acre. The suspension of SEVIN® brand SL Carbaryl Insecticide should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. If you should have any other questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

**NOTE:** When treatment with SEVIN® brand SL Carbaryl Insecticide has been completed, further field irrigation over the treated area should be avoided for 24 to 48 hours to prevent washing the chemical off the crop.

## **GENERAL PRECAUTIONS FOR APPLICATIONS THROUGH SPRINKLER IRRIGATION SYSTEMS**

Maintain continuous agitation in mix tank during mixing and application to assure a uniform suspension.

Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute solution per unit time.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e. g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift, when system connection or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from nonuniform distribution of treated water.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place.



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## LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use when it is used in accordance with such directions; and (c) that the directions, warnings and other statements on this label are based upon responsible experts' evaluation of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants, and of residues on food crops, and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE, ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

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