

PM 12 KE G# 2464-333

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAR - 2 1990

Ms. Lizbeth Huckaba
Rhone-Poulenc Ag Company
2 T.W. Alexander Drive
P.O. Box 12014
Research Triangle Park, NC 27709

Subject: Sevin Brand XLR Carbaryl Insecticide
EPA Reg. No. 264-333
Your submission dated 12/13/89
Revised Labeling

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
 1. Some text seems to be missing from the sentence that starts on page 3 and continues on page 4. This sentence should be modified to read something like: "Regular long-sleeved and long-legged work clothing should be worn while working in treated areas".
 2. Delete the "AND" from site Avocados on page 17.
 3. Delete the site "Grass Grown for Seed" from page 22, or submit data to demonstrate that use rate of 8 pounds active per acre will not result in over-tolerance residues for grass seed crops.

51656:I:CR-44:Kumar:C.Disk:KENCO:02/06/90:de:VO:SW:EX:CT

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

2
28

3. Submit five (5) copies 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 label is enclosed for your records.

Sincerely yours,

Dennis H. Edwards, Jr.
Product Manager (12)
Insecticide-Rodenticide Branch
Registration Division (H7505C)

Enclosure

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

SEVIN® brand XLR PLUS

Carbaryl Insecticide

ACCEPTED
with COMMENT
in EPA Letter Dated

MAR - 2

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

264-333

For Agricultural or 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)

E.P.A. Reg. No. 264-333

E.P.A. Est. No. 264-MO-02

KEEP OUT OF REACH OF CHILDREN

CAUTION

CUIDADO ✓

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

FOR ADDITIONAL PRECAUTIONARY STATEMENTS See Inside Booklet.

For Emergency Information ONLY Call 24 Hours A Day 1-800-521-8235 ✓

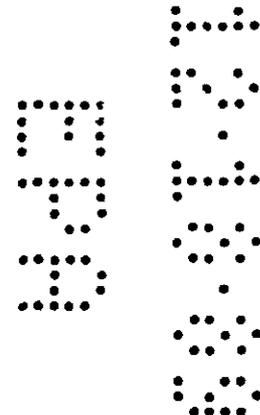
For Product Handling, Use and General Information Call 1-800-334-9745.

NET CONTENTS

Made in U.S.A.

RHONE-POULENC AG COMPANY
P. O. Box 12014, 2 T. W. Alexander Drive
Research Triangle Park, NC 27709

SEVIN® is the registered trademark of RHONE-POULENC. for carbaryl insecticides.



PRECAUTIONARY STATEMENTS

CAUTION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

MAY BE HARMFUL IF SWALLOWED OR INHALED. 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 OF OVEREXPOSURE OCCUR RAPIDLY FOLLOWING EXPOSURE TO THIS PRODUCT.

Avoid breathing spray mist. Do not take internally. Avoid contact with eyes, skin or clothing. Wear regular long-sleeved work clothing and head covering. Change to clean clothing daily. Bathe and wash hair after each work day. Do not eat, drink or use tobacco while working with this product or spray solutions. Wash hands and face before eating, drinking or using tobacco. Keep out of reach of children and domestic animals.

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.

STATEMENT OF PRACTICAL TREATMENT

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.

NOTE TO PHYSICIAN

Treat symptomatically. Overexposure to materials other than this product may have occurred.

This product contains an oxime 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. Improve tissue oxygenation as much as possible before administering atropine to minimize the risk of ventricular fibrillation. 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.

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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. Call Rhône-Poulenc, 1-800-334-7577 before sending samples. Analyses will be arranged by Rhône-Poulenc Ag Company.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to aquatic and estuarine invertebrates. Do not apply directly to water and wetlands, except under the forest canopy and use on rice. 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. Do not contaminate water when disposing of equipment washwaters.

BEE CAUTION

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. However, field studies have shown that SEVIN® brand XLR PLUS Carbaryl Insecticide is less hazardous to honey bees than other carbaryl products when direct application to bees is avoided and the spray residues have dried. For maximum honey bee hazard reduction, apply from late evening to early morning or when bees are not foraging. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging in the treatment area. However, applications may be made during foraging periods if the beekeeper takes one of the following precautionary measures prior to bee flight activity on the day of treatment: (1) Confine the honey bees to the hive by covering the colony or screening the entrance or; (2) locate hives beyond bee flight range from the treated area. Precautionary measures may be discontinued after spray residues have dried. Contact your cooperative Agricultural Extension Service or your local Rhone-Poulenc Ag Company 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.

READ THIS LABEL BEFORE USE. STRICTLY OBSERVE LABEL DIRECTIONS AND CAUTIONS, AND APPLICABLE FEDERAL AND STATE REGULATIONS. DO NOT USE ON ANY CROP NOT LISTED ON THIS LABEL OR SUPPLEMENTAL LABELING AS ANY RESIDUES REMAINING MAY BE ILLEGAL OR HARMFUL.

GENERAL INFORMATION

SEVIN® brand XLR PLUS 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 by air or ground.

GENERAL WORKER PROTECTION STATEMENT

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.

Do not enter treated areas without protective clothing until sprays have dried.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Advise workers to stay out of treated areas until spray deposits have dried. This includes

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should be worn while working in treated areas

Regular long-sleeved and long-legged work clothing. See PRECAUTIONARY STATEMENTS, STATEMENT OF PRACTICAL TREATMENT and NOTE TO PHYSICIAN for additional information. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: appropriate signal word (CAUTION), area treated with SEVIN® brand XLR PLUS Carbaryl Insecticide, date of application, appropriate clothing, and re-entry interval (i.e., until sprays have dried) and actions to be taken in case of accidental exposure.

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. Application may be made without removing livestock from area being treated for those uses with no preharvest limitations. Do not apply at greater rates or at more frequent intervals than is 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 rice 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 XLR PLUS Carbaryl Insecticide, and then 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.

WASHOFF RESISTANCE AND COVERAGE

Dilution of 1 volume of SEVIN® brand XLR PLUS Carbaryl Insecticide with 1 volume of water provides maximum resistance to washoff by rainfall or overhead irrigation. Dilutions higher than 1 part SEVIN® brand XLR PLUS Carbaryl Insecticide to 39 parts water (1:39) are not recommended when washoff resistance is desired.

To achieve washoff resistance, SEVIN® brand XLR PLUS Carbaryl Insecticide must be diluted as stated above, and droplets must dry on the foliage. When atmospheric humidity is low, a drying time of at least two hours is generally adequate. Under high humidity a longer drying time is required. Washoff resistance cannot be expected if this product is applied to wet foliage and has not thoroughly dried prior to rainfall or overhead irrigation.

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On all crops, use sufficient spray volume to obtain thorough coverage. Optimum pest control under certain crop, pest or climatic conditions may require spray gallonages higher than the 1:39 dilution. For example in hot, arid weather (low humidity), higher spray gallonage per acre may be required to compensate for loss from evaporation and insure thorough coverage. The total spray volume required for effective pest control can best be determined by previous experience, pest and crop conditions and local recommendations.

COMPATIBILITY

SEVIN® brand XLR PLUS 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 XLR PLUS 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

On all crops use sufficient gallonage to obtain thorough and uniform coverage. Observe crop label instructions for specific directions regarding spray volume where they occur. Calibrate spray equipment to deliver the required volume. ~~The flow rate of this product diluted 1:1 with water is similar to water. 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.

DIRECTIONS FOR USE THROUGH SPRINKLER IRRIGATION SYSTEMS

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

SPRAY PREPARATION: First prepare a suspension of SEVIN® brand XLR PLUS 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 XLR PLUS, and then the remaining volume of water. (Suspension concentrations using the appropriate dosage per acre recommended on this label of SEVIN® BRAND XLR PLUS, 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 XLR PLUS into the irrigation water line so as to deliver the desired rate per acre. The suspension of SEVIN® brand XLR PLUS 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 XLR PLUS 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.

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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 beyond the area intended for treatment.

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.

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. 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. Do not dilute greater than 1:39 (volume product: volume water) where washoff resistance is desired. Where maximum washoff resistance is needed, do not exceed a 1:1 dilution. To prepare small volumes of spray mixture use 1 tablespoonful (1/2 fluid ounce) of SEVIN® brand XLR PLUS 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 XLR PLUS/ 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 the lower rate for nymphs on small plants or sparse vegetation in wasteland rangeland, ditchbanks and borders. Use the higher rate 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 XLR PLUS/ ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS		
Alfalfa, Clovers, Birdsfoot trefoil	Blister beetles	1/2 to 1	0	OBSERVE BEE CAUTION		
	Mexican bean beetle					
(DO NOT USE ON BIRDSFOOT TREFOIL IN CALIFORNIA)	Alfalfa caterpillar	1	0 (clovers & birdsfoot trefoil)	Observe plant response precautions		
	Potato Leafhopper					
	Bean leaf beetle		Three cornered alfalfa hopper	7 (alfalfa)	Carbaryl may cause a temporary bleaching of tender alfalfa foliage. Apply only once per cutting for alfalfa up to 1 1/2 quarts. On dense growth, use 25 to 40 gallons per acre with ground equipment to ensure adequate coverage. For alfalfa weevil larvae, if pretreatment damage is extensive, cut alfalfa and treat the stubble. This product is not effective against adult alfalfa weevils.	
	Cucumber beetles		Thrips			
	Green cloverworm		Velvetbean caterpillar			
	Japanese beetle					
	Leafhoppers					
	Alfalfa blotch leafminer		European alfalfa beetle			1 to 1 1/2
	Amyworm		Fall armyworm			
	Cloverhead weevil		Lygus bugs			
	Corn earworm		Stink bugs			
	Cutworms		Webworms			
Egyptian alfalfa weevil larvae	Yellowstriped armyworm					
Essex skipper						
Alfalfa weevil larvae						
West of the Rocky Mountains		1 to 1 1/2				
East of the Rocky mountains		1 1/2				
Grasshoppers		1/2 to 1 1/2	Refer to the general GRASSHOPPER heading above.			

BEST AVAILABLE COPY

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

CROP	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS/ ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS	
Asparagus	Asparagus beetle		1 to 2	1	Treat ferns or brush growth. Do not treat more than once every 3 days. ✓	
	Apache cicada Asparagus beetle		2 to 4	Post harvest application only		
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		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		0 (except cowpeas and lentils) 3 (cowpeas) 7 (lentils)
	Grasshoppers			1/2 to 1 1/2		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		
	Alfalfa Looper			1 1/2		
	Cowpea curculio			2		
	CALIFORNIA ONLY					
	Cabbage Broccoli Brussels sprouts Cauliflower Kohlrabi	Corn earworm Lima bean podborer		Lygus bugs Stink bugs	2	
		Flea beetles		Harlequin bug	1/2 to 1	3
	Chinese cabbage Collards Hanover salad Horseradish Kale Mustard greens Radishes Rutabagas Turnips	Armyworm Corn earworm Diamondback moth Fall armyworm		Imported cabbage-worm	1 to 2	3 (horseradish, radishes, rutabagas and turnip roots)
Flea beetles Harlequin bug		Leafhoppers	1/2 to 1	14 (Chinese cabbage, collards, Hanover salad, kale, mustard greens, and turnip tops)		
Aster leafhopper			1 to 1 1/2			
Armyworm Corn earworm Fall armyworm		Imported cabbageworm Stink bugs Tarnished plant bug	1 to 2			

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CROP	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS/ ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Carrots				0	
Celery	Flea beetles	Leafhoppers	1/2 to 1	(carrots)	
Parsley					
Parsnips	Aster leafhopper	Spittlebugs	1 to 1 1/2	3	Treat on a 5 to 7 day schedule. ✓
(DO NOT USE ON CELERY IN CALIFORNIA)	Lygus bugs			(parsnips)	
	Armyworm	Stink bugs		14	
	Com earworm	Tarnished plant bug	1 to 2	(celery & parsley)	
Com (field, sweet, pop)	Armyworm	Flea beetles	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. ✓
	Chinch bugs	Japanese beetle			
	Com earworm	Sap beetles			
	Com rootworm adults	Southwestern corn borer			
	Fall armyworm	Leafhoppers			
	Grasshoppers		1/2 to 1 1/2		
	European corn borer		1 1/2 to 2		
	Western bean cutworm		2		
	Cutworms		2 to 3		
Cotton	Cotton fleahopper	Striped blister beetle	1/2 to 1	7	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.
	Cotton leafworm	Thrips			
	Flea beetles				
	Boll weevil	Tarnished plant bug			
	Cotton bollworm	bug	1 to 2		
	Fall armyworm	Yellowstriped armyworm			For light to moderate populations in Western irrigated cotton.
	Leafrollers	(cotton cutworm)			
	Leafhoppers				
	Lygus bugs		1 to 2		

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CROP	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS/ ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Cotton (cont'd)	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		Observe plant response precautions. ✓
	Cucumber beetles Flea beetles	Leafhoppers Squash bugs	1	0	
Dandelion Endive (Escarole) Lettuce Salsify	Flea beetles Harlequin 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 Lygus bugs	Spittlebugs	1 to 1 1/2	14 (dandelion, endive (escarole), leaf lettuce & salsify tops)	
	Amyworm Corn earworm Fall armyworm	Imported cabbageworm Stink bugs Tarnished plant bug	1 to 2		
Flax Proso Millet (DO NOT USE IN CALIFORNIA)	Armyworm		1 to 1 1/2	42	Do not graze treated areas or harvest for dairy feed prior to crop maturity. ✓
	Grasshopper		1/2 to 1 1/2		
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. ✓

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CROP	INSECT	QUARTS OF SEVIN® BRAND XLR PLUS/ ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS	
Pasture	Armyworm Chinch bugs Essex skipper Fall armyworm Striped grass looper Thrips Range caterpillar Range crane fly	1 to 1 1/2	0 (aerial application) 14 (ground applications)	To control thrips in grasses grown for seed, use high spray pressure to improve penetration into boot. 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 pastures may be grazed or cut for hay on day of treatment. Carefully mark swaths to avoid over-application.	
	Grasshoppers	1/2 to 1 1/2		Refer to the general GRASSHOPPER heading above.	
Peanuts	Blister beetles	Mexican bean beetle	1/2 to 1	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		0
	Armyworm Corn earworm Fall armyworm	Stink bugs Webworms	1 to 1 1/2		
	Whitefringed beetle adults Cutworms		2		
Peas	Colorado potato beetle Leafhoppers		1	3	
	Armyworm		1 to 1 1/2	✓	
	Alfalfa caterpillar Cutworms Pea leaf weevil	Pea weevil Yellowstriped armyworm	1 1/2	✓	
	Alfalfa looper		2 1/2	WASHINGTON STATE ONLY ✓	

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

CROP	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
✓ Potato	Flea beetles		1/2 to 1		Thorough coverage is essential to effectively suppress stink bugs. When disease transmission is suspected, monitor fields following application and re-treat if reinfestation occurs. ✓
✓ Tomato	Colorado potato beetle	Stink bugs (suppression)	1 to 2	0	
✓ Eggplant	European corn borer	Tarnished plant bug			
✓ Pepper	Fall armyworm	Tomato fruitworm			
	Lace bugs	Tomato hornworm			
	Leafhoppers	Tomato pinworm			
	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		1/2 to 1	0	FOR AERIAL APPLICATION ONLY.
	Mormon cricket				
	Range caterpillar				
	Range crane fly				
	Grasshoppers		1/2 to 1 1/2		Refer to the general GRASSHOPPER heading above.
✓ Rice	Armyworm	Fall armyworm	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 ✓
	Chinch bugs	Stink bugs			
	Grasshoppers		1/2 to 1 1/2		Refer to the general GRASSHOPPER heading above.
	Armyworm	Tadpole shrimp	2		CALIFORNIA ONLY. For optimum tadpole shrimp control apply to water when pest first appears.
	Leafhoppers				

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

CROP	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS/ ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS	
Sorghum (milo, grain sweet and hybrid)	Sorghum midge		3/4 to 1	21 (grain)	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. Use high pressure spray in sufficient volume to ensure penetration into heads. 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.	
	Amyworm	Fall armyworm	1 to 2			
	Chinch bugs	Stink bugs				
	Com earworm	Webworms		0 (forage)		
	Southwestern corn borer		1 1/2			
	Cutworms		2			
Grasshoppers			1/2 to 1 1/2		Refer to the general GRASSHOPPER heading above.	
Soybeans	Bean leaf beetle	Japanese beetle	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.	
	Blister beetle	Mexican bean beetle				
	Cucumber beetles	Velvetbean caterpillar				
	Grape colaspis					
	Green cloverworm					
	Com earworm		1/2 - 1 1/2			
	Grasshoppers		1/2 to 1 1/2			Refer to general GRASSHOPPER heading above.
	Alfalfa caterpillar	Three cornered alfalfa hopper	1			
	Leafhoppers	Thrips				
	Amyworm	Fall amyworm	1 to 1 1/2			
Cutworms	Webworms					
Painted lady (Thistle caterpillar)	Woollybear caterpillar	1 1/2 to 2				
Saltmarsh caterpillar	Yellowstriped amyworm					
Sugar beets	Amyworm	Flea beetles	1 to 1 1/2	14	Refer to general GRASSHOPPER heading above.	
	Beet leaf beetle	Leafhoppers				
	Fall amyworm	Webworms				
Grasshopper			1/2 to 1 1/2			
Cutworms			1 1/2			

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

CROP	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS/ ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
✓ Sunflower (DO NOT USE IN CALIFORNIA)	Cutworms		1 1/2	60	Refer to general GRASSHOPPER heading above.
	Armyworm		1 1/2 to 2		
	Fall armyworm	Sunflower beetle	1 to 2		
	Sunflower moth				
	Stem weevil		1 to 2		
	Grasshopper		1/2 to 1 1/2		
✓ Sweet Potato (DO NOT USE IN CALIFORNIA)	Corn earworm	Sweet potato hornworm	1 to 2	0	Apply as a foliar spray as needed.
	Cucumber beetles	Tortoise beetles			
	Flea beetles				
	Yellowstriped armyworm		2		
	Sweet potato weevil		1 to 2		Full coverage of plants is essential. Use lower rate on young plants and higher rate on mature plants.
✓ Tobacco Plant bed Treatment	Flea beetle		1	0	OBSERVE PLANT RESPONSE PRECAUTIONS. For flea beetle control, use 4 tps. (0.7 fl. oz.) in 6 gallons of water and apply to 100 square yards.
	Green June beetle grubs		1		
					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.
✓ Field Treatment	Budworms	Japanese beetle	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.
	Fall armyworm	June beetle			
	Flea beetles	Suckfly			
	Hornworms				

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

CROP	INSECT	QUARTS OF SEVIN® BRAND XLR PLUS/ ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Wasteland, Rights-of-Way, Heuge-rows, Ditch banks, Roadsides	Black grass bug	1/2 to 1	0 (aerial application)	Apply a maximum of 2 applications per year. Allow at least 14 days between applications.
	Mormon cricket			
	Range caterpillar		14 (ground application)	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. ✓
	Range crane fly			Carefully mark swaths to avoid over-application.
	Grasshoppers	1/2 to 1 1/2		Refer to the general GRASSHOPPER heading above.
Wheat (including triticale) (DO NOT USE IN CALIFORNIA)	Flea beetles	1/2 to 1	0 (forage)	Refer to the general GRASSHOPPER heading above
	Grasshoppers	1/2 to 1 1/2		Application is effective against eggs, larvae and adult of the cereal leaf beetle. ✓
	Cereal leaf beetle	1	21 (grain)	
	Armyworm	Fall armyworm	1 to 1 1/2	

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

TREE FRUIT AND NUT CROPS

For dilute sprays apply the specified dosage per 100 gallons of water. For concentrate and aerial sprays, maintain the recommended rate per acre equivalent to that used in a dilute spray. The optimum spray gallonage will depend on tree size, density and stage of growth. Typical spray gallonages per acre range from 200-300 gallons for dilute sprays, 30-100 gallons for concentrate sprays and 5-25 gallons of aerial sprays. Do not exceed maximum label rate per acre per application.

APPLE THINNING

CROP	QUARTS OF SEVIN® BRAND XLR PLUS/ 100 GAL.	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
APPLES	1/4 to 1/2	1	<p>OBSERVE BEE CAUTION. 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 this product. Exercise caution to avoid possible yield reduction. Rates may vary depending on variety and local orchard conditions. Consult with your County Extension Service or other experts for advice on the proper use of this product. 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 are recommended for the combination. Also, a petal fall application 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>

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

CROP	INSECT	QUARTS OF SEVIN® BRAND XLR PLUS/ 100 GALS.	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
✓ Almond	Peach twig borer San Jose scale Fruittree leafroller <hr/> Navel orangeworm	1	28	OBSERVE BEE CAUTION 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. <hr/> 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. Do not apply more than 5 quarts per acre.
✓ Avocados AND (FOR CALIFORNIA USE ONLY)	Gypsy moth Japanese beetle	1/2	1	FOR USE IN JAPANESE BEETLE GYPSY MOTH: ERADICATION PROGRAMS IN CALIFORNIA ONLY. Use with ground equipment and spray to run off. Apply when insects or their damage appear. Do not make more than 1 application per season.
✓ Chestnuts (DO NOT USE IN CALIFORNIA)	Chestnut weevil	2 to 3	0	Make 4 applications at weekly intervals beginning in late July for adult chestnut weevil control. Last application should be made prior to shuck split.
52 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 Fuller rose beetle Black scale Brown soft scale California red scale	Orange tortrix Western tussock moth West Indian sugarcane borer (adults) <hr/> Citricola scale Citrus snow scale Yellow scale	1 3/4 to 1	OBSERVE BEE CAUTION Do not apply more than 20 quarts of this product per acre per application. 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.
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.

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CROP	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS/ 100 GALS.	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Pomefruit (including apples, pears, loquats, crab- apples, oriental pears and quince)	Apple aphid	Lesser appleworm	$\frac{3}{4}$ 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.
	Apple maggot	Lygus bugs			
	Apple rust mite	Orange tortrix			
	Apple sucker	Oystershell scale			
	Bagworms	Pearleaf blister mite			
	California pearslug (pear sawfly)	Pear psylla			
	Eastern tent caterpillar	Pear rust mite			
	European apple sawfly	Periodical cicada			
	Eyespotted bud moth	Plum curculio			
	Forbes scale	Redbanded leafroller			
	Fruitree leafroller	Rosy apple aphid			
	Green fruitworm	San Jose scale			
	Gypsy moth	Tarnished plant bug			
	Lecanium scales	Tentiform leafminers			
		Woolly apple aphid			
		Yellowheaded fireworm			
		Apple mealybug	White apple leafhopper		
	Apple aphid				
	Codling moth				
	Japanese beetle		$\frac{3}{4}$	Apply as needed with ground equipment at 7-14 day intervals.	
Walnut	Calico scale	Fibertworm	$\frac{1}{2}$	0	Apply 1000 gallons of dilute spray per acre for mature trees. For codling moth apply first spray when average cross-sectional diameters of developing nuts are $\frac{1}{2}$ to $\frac{3}{4}$ inch. Repeat during middle or late June as needed. Apply dilute sprays in 200-500 gallons of water per acre.
	European fruit lecanium	Fruitree leafroller			
		Frosted scale			
	Codling moth		$\frac{1}{2}$		
	European earwig		2	Spray tree trunks to point of run-off	

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

SMALL FRUIT CROPS

Recommended dosages refer to quarts of SEVIN® brand XLR PLUS 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 XLR PLUS/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
✓ Blackberries Raspberries Dewberries (including boy- senberries and Loganberries)	European raspberry aphid Japanese beetle Leafhoppers Omnivorous leafroller Raspberry sawfly	Leafrollers Rose chafer Snowy tree cricket 2	1 to 2 2	7 CALIFORNIA ONLY
✓ 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 OBSERVE BEE CAUTION. CAUTION: May kill shrimp and crabs. Do not use in areas where these are important resources. Apply as needed through prebloom at 7 to 10 day intervals. Resume applic- ations as needed beginning at late bloom.
✓ Strawberries	Flour beetles Meadow spittlebug (strawberry fruitworm) Omnivorous leaflier	Strawberry clipper Strawberry bud weevil Strawberry leafroller Strawberry weevil	1 to 2	1 Carbaryl may injure Early Dawn and Sunrise varieties.

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

TREES AND ORNAMENTALS

For dilute-spray ground applications to the sites listed below, 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 XLR Plus Carbaryl Insecticide per gallon of water, where rates of 1 quart are indicated. For aerial applications, apply the specified dosage per acre in sufficient spray volume to provide thorough coverage. Avoid direct application to lakes, streams and ponds.

SITE	INSECT			QUARTS OF SEVIN® BRAND XLR PLUS/ACRE OR 100 GAL	SPECIFIC DIRECTIONS
Trees (including syrup producing sugar maple, shade trees, shelter belts, forests, plantations, parks, and recreational areas), Ornamentals (including roses, flowers and other herbaceous plants), Woody plants and Shrubs	Ants	Holly bud moth	Poinsettia horn-worm	. 1	Observe plant response precautions.
	Apple aphid	Holly leafminer	Psyllids		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. ✓
	Armyworm	Jackpine budworm	Puss caterpillar		For optimum worm control, treat when in early instars. Addition of a sticker may improve residual control.
	Azalea leafminer	Japanese beetle	Redhumped oakworm		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.
	Bagworms	Jeffrey pine needleminer	Rose aphid		DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.
	Birch leafminer	June beetles	Rose chafer		
	Blister beetle	Lace bugs	Rose slug		
	Boxelder bug	Leafhoppers	Saddled prominent Sawflies (exposed)		
	Boxwood leaf-miner	Leafrollers	Sowbugs		
	Brown tail moth	Locust borer	Spiney elm caterpillar		
	Cankerworms	Maple leafcutter	Springtails		
	Catalpa sphinx	Mealy bugs	Spruce needle-miner		
	Chiggers	Mimosa webworm	Subtropical pine tip moth		
	Cutworms	Nantucket pine tip moth	Tent caterpillars		
	Cypress tip moth	Oak leafminers	Thorn bug		
	Eastern spruce gall adelgid	Oak moth	Thrips (exposed)		
	Elm leaf aphid	Oak skeletonizer	Ticks		
	Elm leaf beetle	Oakworm complex	Walnut caterpillar		
	Elm sawworm	Oleander caterpillar	Webworms		
	Eriophyid mites	Olive ash borer	Western hemlock looper		
	European pine shoot moth	Orange-striped oakworm	Willow leaf beetles		
	Fall armyworm	Periodical cicada	Yellow poplar weevil		
	Flea beetle	Pine looper			
	Fuller rose beetle	Pine sawfly			
	Gall midges	Pine spittlebug			
	Gall wasps	Pitch pine tip moth			
	Greenstriped mapleworm	Plant bugs			
Grasshoppers					
Hackberry niplegall maker					

SEVIN® brand XLR Plus Carbaryl Insecticide-Pending-8/18/88

SITE	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS/ACRE OR 100 GAL	SPECIFIC DIRECTIONS
Trees and Ornamentals (Cont.)	Cooley spruce gall aphid	Spruce budworm	1 to 2	Use the higher rate when large larvae or heavy populations are present. ✓
	Douglas-fir tussock moth	Western spruce budworm		
	Balsam twig aphid	Woolly gall aphid		
	Grey moth			
	Ips engraver beetles	Spruce beetle	20	Effective for beetle control or as a protective treatment.
	Mountain pine beetle	Western pine beetle		
	Roundheaded pine beetle			
	Elm bark beetle		$\frac{3}{4}$ to 1	Apply 1 gallon of spray per 50 square feet of bark prior to beetle flight or host-tree attack. Treat tree trunk from ground level up, ✓ until trunk diameter is less than 5 inches. Repeat treatment as needed.
				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.

LAWNS, RECREATIONAL AREAS AND GRASS GROWN FOR SEED

SITE	INSECT		SPECIFIC DIRECTIONS
Turfgrasses and Grass grown for seed	Ants	June beetles	Use 6 fl. oz. of this product per 1000 square feet (8 quarts per acre) of turf grass. Make applications in sufficient spray volume for thorough coverage and turf thatch penetration. Repeat treatment as necessary. ✓
	Armyworm	Leafhoppers	
	Bluegrass billbug	Lucerne moth	
	Centipedes	Millipedes	
	Chiggers	Mosquitoes (adults)	
	Chinch bugs	Sod webworm	
	Cutworms	(lawn moths)	
	Earwigs	Sowbugs	
	Essex skipper	Spittlebugs	
	European crane fly	Springtail	
	Fall armyworm	Ticks	
	Fiery skipper	White grubs	
	Fleas	Yellowstriped armyworm	
Grasshoppers			
		For Armyworm, Cutworm, Fall Armyworm and Sod Webworm control: Do not irrigate treated areas following insecticide application. ✓	
		For Chinch bug control: Treat turf grass area sufficiently beyond damaged zone to assure adequate control rather than just damaged areas. Irrigation on turf grass area before insecticide application ✓ will aid in penetration into turf grass.	
		For White grub control: Applications should be made when grub 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.	
		DO NOT ALLOW PUBLIC USE OF TREATED AREAS ✓ DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.	

IMPORTED FIRE ANT CONTROL

SITE	AMOUNTS OF SEVIN® BRAND XLR PLUS/ VOLUME OF WATER	SPECIFIC DIRECTIONS
Lawns, Cemeteries and Recreational Areas (including turf, golf courses, and parks) Pastures Rangeland Forested Lands and 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. DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.
Nursery Stock, Vegetable Transplants, Foliage plants and Bedding plants	1 1/2 quarts/ 100 gallons	DO NOT USE ON ANY FOOD CROP NOT LISTED ON LABEL. DO NOT USE IN GREENHOUSES. 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.

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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 XLR PLUS Carbaryl Insecticide per gallon of water, where rates of 1 quart are indicated.

CROP	QUARTS OF SEVIN® BRAND XLR PLUS/100 GAL.	SPECIFIC DIRECTIONS
Pastures, Rangelands, Parks, Recreational Areas, Logging Camps, Military Posts and Adjacent Forested lands or Wastelands	1/4 to 1 (1/2 to 1 tablespoonful per gallon)	DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATION OR UNTIL SPRAYS HAVE DRIED. CAUTION: May kill shrimp and crabs. Do not use in areas where these are important resources. OBSERVE BEE CAUTION 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, 1/2 to 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.

POULTRY ROOSTS AND BUILDINGS ONLY

POULTRY QUARTERS	QUARTS OF SEVIN® BRAND XLR PLUS/100 GAL.	SPECIFIC DIRECTIONS
Bed bugs Chicken mite Fleas Lice Northern fowl mite	4	DO NOT TREAT POULTRY OR GAME BIRDS. 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.
Darkling beetle (Lesser mealworm or Litter beetle)	50	Apply 1 to 2 gallons of spray mixture per 1000 square feet of floor space, litter surface, walls, cracks, posts, crevices, and around ventilation areas to inculation. Optimum spray timing is immediately after flock is removed from the house when beetles are most active. Repeat as needed. Ventilate while spraying. Do not treat premises within 7 days of slaughter.

PEST CONTROL AROUND BUILDINGS

General Information

NOTE: Staining may occur on certain surfaces such as stucco, brick, cinder block and wood. Therefore, applications of SEVIN® brand XLR PLUS 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.

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 16 oz. this product per 50 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.

DIRECTIONS FOR USE AS A WHEAT BRAN BAIT

FOR END USE ONLY. NOT FOR REPACKAGING.

FOR USE ONLY BY GOVERNMENT PERSONNEL OR PERSONS UNDER THEIR DIRECT SUPERVISION.

Mixing Instructions

Mix the appropriate amount of SEVIN® brand XLR PLUS Carbaryl Insecticide with wheat bran to make a carbaryl wheat bran bait containing 2% to 10% active carbaryl. For example, for a bait containing 5% carbaryl, mix 1 quart SEVIN® brand XLR PLUS Carbaryl Insecticide (contains 1 lb. active carbaryl) with each 19 pounds of wheat bran. Mix only the amount of bait necessary for each insect control program.

Storage Instructions

Store carbaryl bran baits in cool, dry area out of reach of children and animals. Do not contaminate water, food, or feed by storage or disposal.

NOTE: Carbaryl bran baits should only be stored temporarily while awaiting application.

Application Instructions

Applications may be made with ground equipment (hand cyclone spreader) or with aerial application equipment with a metered bait spreader attachment.

PASTURES, RANGELAND, WASTELAND, ROADSIDES

Use 0.50-1.50 lbs. active ingredient/acre for the control of grasshoppers and Mormon crickets. The lower rate is suggested for early instars on small plants or sparse vegetation. Use the higher rate for adults or dense vegetation. Use of low bait assay and higher rate is suggested for control of high grasshopper populations. Treatment may be repeated as necessary. Preharvest interval is 0 days.

IMPORTANT: BEFORE USING SEVIN® BRAND XLR PLUS CARBARYL INSECTICIDE, READ AND FOLLOW CAREFULLY, OBSERVE THE PRECAUTIONARY STATEMENTS AND ALL OTHER INFORMATION APPEARING ON THE PRODUCT LABEL.

STORAGE AND DISPOSAL

STORAGE

Store unused SEVIN® brand XLR PLUS Carbaryl Insecticide 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.

If container is damaged, before cleaning up, put on long-sleeved shirt, full length trousers, head covering, and protective gloves.

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

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.

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