

Reg # 264-333

PM-19
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

FEB 23 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Larry R. Hodges
RHONE-POULENC AG COMPANY
BOX 12014
RESEARCH TRIANGLE PARK, N.C. 27709

Subject: Label Amendment Submission of 07/26/93 in Response to PR Notice 93-7
EPA Reg. No. 264-333
SEVIN BRAND XLR 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.

BEST AVAILABLE COPY



Recycled/Recyclable
Printed with Soy/Canola ink
contains at least 50% recycled paper

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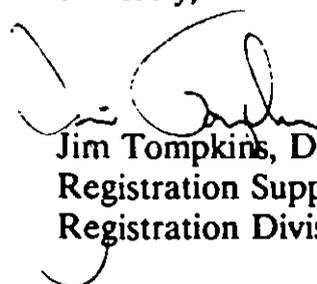
Submit the final printed labeling via the U.S. Postal Service to:

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

RHONE-POULENC AG COMPANY
SEVIN BRAND XLR CARBARYL INSECTICIDE
264-333 07/26/93
Original Submission

The chemical-resistant category statement to state: "Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category E on an EPA chemical resistance category selection chart." Remove the incorrect glove requirement (if any) and add "Chemical-resistant gloves, such as barrier laminate, nitrile rubber, neoprene rubber or viton." The exact location is shown in Sections A and B on Part I of the product Worksheet in Supplement Three-A to PR Notice 93-7.

Remove 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 within the Agricultural Use Box and place it above the Agricultural Use Box.

The glove requirement for early entry in the Agricultural Use Requirements box on your proposed labeling is missing or incorrect. Remove the incorrect requirement (if any) and add "Chemical-resistant gloves, such as barrier laminate or nitrile rubber or neoprene rubber or viton". The exact location is shown in Sections F and G on Part 2 of the Product Worksheet in Supplement Three-A to PR Notice 93-7.

The circled statement(s) in the Non-Agricultural Use Requirements box contains errors. Use each statement exactly as it appears on your original label.

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

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SEVIN® brand XLR PLUS Carbaryl

Insecticide

ACCEPTED
with COMMENTS
in EPA Letter Dated

For Agricultural or Commercial Use Only

FEB 23 1994

ACTIVE INGREDIENT:

Carbaryl (1-naphthyl N-methylcarbamate)

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

41.2% by wt.

INERT INGREDIENTS

264-333

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**

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day 1-800-334-7577

For **PRODUCT USE** Information Call 1-800-334-9745

STATEMENT OF PRACTICAL TREATMENT

Carbaryl is an N-Methyl Carbamate Insecticide.

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.

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.

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.**

NOTE TO PHYSICIAN

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

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. 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. 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.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS (& DOMESTIC ANIMALS)

CAUTION

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

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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 or 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. 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 Rhône-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 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: coveralls, 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.

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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 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 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 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.

PREHARVEST AND GRAZING USE INFORMATION AND LIMITATIONS

Tolerances established under the Federal Food, Drug and Cosmetic Act permit the sale of labeled 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 unless noted otherwise in use directions for specific crops. 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.

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PLANT RESPONSE PRECAUTIONS

Application to wet foliage or during periods of high humidity may cause injury to tender foliage.

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

The use of adjuvants may increase the potential for crop injury to sensitive crops.

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.

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 of 50 mesh slotted strainers in spray system and 25 mesh slotted strainers behind nozzles is recommended.

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 section for disposal instructions.

NOTE: Staining may occur on certain surfaces such as stucco, brick, cinder block, and wood. Spray deposits on painted or stained surfaces or finishes (i.e., cars, houses, trailers, boats, etc.) should be immediately removed by washing to prevent discoloration. Avoid applications to surfaces where visible spray residues are objectionable.

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.

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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.

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, diamondback moth, Colorado potato beetle, spotted tentiform leafminer, Southern green stink bug and tobacco budworm (on cotton) to carbaryl. If local experience indicates inadequate control, use an alternative pesticide.

GRASSHOPPERS

CROP	QUARTS OF SEVIN® BRAND XLR PLUS/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
All Crops on this label	1/2 to 1 1/2	See specific crop sections	Apply 1/2 to 3/4 quarts per acre of this product for nymphs on small plants or sparse vegetation. Apply 1 to 1 1/2 quarts per acre 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.

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.

CROP	INSECT	QUARTS OF SEVIN® BRAND XLR PLUS/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)	<p>OBSERVE BEE CAUTION</p> <p>Observe plant response precautions.</p> <p>Carbaryl may cause a temporary bleaching of tender alfalfa foliage. Apply only once per cutting for alfalfa up to 1 1/2 quarts.</p> <p>On dense growth, use 25 to 40 gallons of water per acre with ground equipment to ensure adequate coverage.</p> <p>For alfalfa weevil larvae, if pretreatment damage is extensive, cut alfalfa and treat the stubble. This product is not effective against adult alfalfa weevils.</p> <p>For grasshopper control, refer to the GRASSHOPPER section above.</p>	
	Alfalfa caterpillar Bean leaf beetle Cucumber beetles Green cloverworm Japanese beetle Leafhoppers	Potato leafhopper Three cornered alfalfa hopper Thrips Velvetbean caterpillar	1		7 (alfalfa)
	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 armyworm	1 to 1 1/2		
	Alfalfa weevil larvae (West of the Rocky Mountains)		1 to 1/2		
	(East of the Rocky Mountains)		1 1/2		
Asparagus	Asparagus beetle	1 to 2	1	<p>Treat ferns or brush growth. Do not treat more than once every 3 days.</p> <p>For grasshopper control, refer to the GRASSHOPPER section.</p>	
	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)	Blister beetles Mexican bean beetle	1/2 to 1	0 (except cowpeas and lentils)	<p>Observe plant response precautions.</p> <p>For grasshopper control, refer to the GRASSHOPPER section.</p>	
	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)
	Armyworm Corn earworm Cutworms European corn borer	Fall armyworm Stink bugs Tarnished plant bug Webworms	1 to 1 1/2		7 (lentils)
	Alfalfa looper		1 1/2		
	Cowpea curculio		2		
Lentils (DO NOT USE ON LENTILS IN CALIFORNIA)	Corn earworm Limabean podborer	Lygus bugs Stink bugs	2	CALIFORNIA ONLY	

CROP	INSECT	QUARTS OF SEVIN® BRAND XLR PLUS/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Cabbage Broccoli Brussels sprouts Cauliflower Kohlrabi	Flea beetles Harlequin bug	1/2 to 1	3	For grasshopper control, refer to the GRASSHOPPER section.
	Armyworm Fall armyworm Corn earworm Imported Diamondback moth cabbageworm	1 to 2		
Chinese cabbage Collards Hanover salad Horseradish Kale Mustard greens Radishes Rutabagas Turnips	Flea beetles Leafhoppers Harlequin bug	1/2 to 1	3 (horseradish, radishes, rutabagas and turnip roots)	For grasshopper control, refer to the GRASSHOPPER section.
	Aster leafhopper	1 to 1 1/2		
	Armyworm Stink bugs Corn earworm Tarnished plant bug Fall armyworm Imported cabbageworm	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)	For grasshopper control, refer to the general GRASSHOPPER section.
	Aster leafhopper Spittlebugs Lygus bugs	1 to 1 1/2	3 (parsnips)	
	Armyworm Stink bugs Corn earworm Tarnished plant bug Fall armyworm	1 to 2	14 (celery & parsley)	
Corn (field, sweet, pop)	Armyworm Flea beetles Chinch bugs Japanese beetle Corn earworm Sap beetles Corn rootworm adults Southwestern corn borer Fall armyworm 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. For grasshopper control, refer to the GRASSHOPPER section.
	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		Treat when infestation averages 15% and at 90% to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness.
	Cutworms	2 to 3		For optimum control, apply in a 12 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.

CROP	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Cotton	Cotton fleahopper Cotton leafworm Flea beetles	Striped blister beetle Thrips	1/2 to 1	7	Use banded and/or directed sprays for optimum control of early season pests. Total coverage is essential for maximum control. For grasshopper control, refer to the GRASSHOPPER section. 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. For light to moderate populations in Western irrigated cotton. Aphid populations will be suppressed by repeated applications of this insecticide.
	Boll weevil Cotton bollworm Fall armyworm Leafrollers Leafhoppers	Tarnished plant bug Yellowstriped armyworm (cotton cutworm)	1 to 2		
	Lygus bugs		1 to 2		
	Pink bollworm		1 1/2 to 2 1/2		
	Cutworms Stink bugs	Saltmarsh caterpillar	2		
Cucumber Melons Pumpkin Squash	Pickleworm	Melonworm	1/2 to 1	0	Observe plant response precautions. For optimum control of squash bugs, apply sufficient spray volume for thorough coverage. Time sprays for early morning or late afternoon. For grasshopper control, refer to the general GRASSHOPPER section.
	Cucumber beetles Flea beetles	Leafhoppers Squash bugs	1		
Dandelion Endive (Escarole) Lettuce Salsify	Flea beetles Harlequin bug	Leafhoppers	1/2 to 1	3 (head lettuce & salsify roots) 14 (dandelion, endive (escarole), leaf lettuce & salsify tops)	Observe plant response precautions. For grasshopper control, refer to the GRASSHOPPER section.
	Aster leafhopper Lygus bugs	Spittlebugs	1 to 1 1/2		
	Armyworm 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. For grasshopper control, refer to the GRASSHOPPER section.
Garden beet Spinach Swiss chard	Flea beetles Harlequin bug	Leafhoppers	1/2 to 1	3 (garden beet roots) 14 (garden beet tops, spinach, Swiss chard)	For grasshopper control, refer to the general GRASSHOPPER section.
	Aster leafhopper		1 to 1 1/2		
	Armyworm Corn earworm Fall armyworm	Stink bugs Tarnished plant bug	1 to 2		

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. For grasshopper control, refer to the general GRASSHOPPER section.	
	Amyworm Chinch bugs Corn earworm	Fall armyworm Stink bugs Webworms	1 to 2		0 (forage)
	Southwestern corn borer		1 1/2		
	Cutworms		2		
Soybeans	Bean leaf beetle Blister beetle Cucumber beetles Grape colaspis Green cloverworm	Japanese beetle Mexican bean beetle Velvetbean caterpillar	1/2 to 1	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. For grasshopper control, refer to the general GRASSHOPPER section.	
	Corn earworm		1/2 to 1 1/2		
	Alfalfa caterpillar Leafhoppers	Three cornered alfalfa hopper Thrips	1		
	Amyworm 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	Amyworm Beet leaf beetle Fall armyworm	Flea beetles Leafhoppers Webworms	1 to 1 1/2	For grasshopper control, refer to the general GRASSHOPPER section.	
	Cutworms		1 1/2		
Sunflower (DO NOT USE IN CALIFORNIA)	Cutworms		1 1/2	For grasshopper control, refer to the general GRASSHOPPER section.	
	Amyworm Fall armyworm Sunflower moth		1 1/2 to 2		
	Stem weevil Sunflower beetle		1 to 2		
Sweet Potato (DO NOT USE IN CALIFORNIA)	Corn earworm Cucumber beetles Flea beetles	Sweet potato hornworm Tortoise beetles	1 to 2	Apply as a foliar spray as needed. For grasshopper control, refer to the general GRASSHOPPER section.	
	Yellowstriped armyworm		2		
	Sweet potato weevil		1 to 2		

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CROP	INSECT	QUARTS OF SEVIN® BRAND XLR PLUS/ACRE	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Tobacco Plant bed treatment Field treatment	Flea beetle	1	0	OBSERVE PLANT RESPONSE PRECAUTIONS. For flea beetle control, use 4 tsps. (0.7 fl. oz.) in 6 gallons of water and apply to 100 square yards.
	Green June beetle grubs	8		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 dienech treatment.
	Budworms Fall armyworm Flea beetles Hornworms	Japanese beetle June beetle Suckfly		1 to 2
Wasteland, Rights-of Way, Hedgerows, Ditch banks, Roadsides	Black grass bug Mormon cricket Range caterpillar Range crane fly	1/2 to 1	0 (aerial application) 14 (ground application)	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. For grasshopper control, refer to the general GRASSHOPPER section.
	Ticks	1 to 1 1/2		Not for use on ticks in California.
Wheat (including triticale) (DO NOT USE IN CALIFORNIA)	Flea beetles	1/2 to 1	0 (forage) 21 (grain)	
	Cereal leaf beetle	1		Application is effective against eggs, larvae and adult of the cereal leaf beetle
	Armyworm Fall armyworm	1 to 1 1/2		Application for armyworm control should be made when armyworms are actively feeding on the upper foliage and night temperatures are not expected to drop below 55° F. If applying by air, use a minimum of 5 GPA for optimal coverage. For grasshopper control, refer to the general GRASSHOPPER section.

TREE FRUIT AND NUT CROPS

For dilute sprays, apply the specified dosage per each 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 but are not limited to 100 - 600 gallons for dilute sprays, 20 - 100 gallons for concentrate sprays and 3 - 25 gallons for 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.</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 this product. Exercise caution to avoid possible yield reduction. Rates may vary depending on variety and local orchard conditions.</p> <p>Consult with your County Extension 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 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>

CROP	INSECT	QUARTS OF SEVIN® BRAND XLR PLUS/100 GALS.	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Almond	Peach twig borer San Jose scale Fruittree leafroller	1	28	OBSERVE BEE CAUTION. For peach twig borer, apply in "popcorn" or petal fall stages when the May brood begins to hatch or thereafter as needed.
	Navel orangeworm			For dormant or delayed dormant timing, apply in combination with a recommended dormant oil. Time early and mid season applications to correspond to moth flight peaks. Do not apply more than 5 quarts per acre. For grasshopper control, refer to the general GRASSHOPPER section.
Avocados (FOR CALIFORNIA USE ONLY)	Gypsy moth Japanese beetle	1/2	1	FOR USE IN JAPANESE BEETLE AND 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. For grasshopper control, refer to the general GRASSHOPPER section.
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. For grasshopper control, refer to the general GRASSHOPPER section.
Citrus Fruits (such as grapefruit, lemons, limes, oranges, tangelos, tangerines, citrus citron, kumquats and hybrids)	Avocado leafroller California orangedog Citrus cutworm Citrus root weevils Citrus rust mite Fruittree leafroller Fuller rose beetle	1	5	OBSERVE BEE CAUTION. Do not apply more than 20 quarts of this product per acre per application. May be mixed with petroleum oils commonly used on citrus.
	Black scale Brown soft scale California red scale	3/4 to 1		For grasshopper control, refer to the general GRASSHOPPER section.
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. For grasshopper control, refer to the general GRASSHOPPER section.

CROP	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS/100 GALS.	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Olives	Olive scale		3/4 to 1	0	<p>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. Do not apply more than 15 quarts of this product per acre per application.</p> <p>For grasshopper control, refer to the general GRASSHOPPER section.</p>
Peaches Apricots Nectarines	Apple pandemis Codling moth Cucumber beetles European earwig Fruittree leafroller Gypsy moth Japanese beetle June beetle Lecanium scales Lesser peachtree borer Olive scale	Orange tortrix Oriental fruit moth Peach twig borer Periodical cicada Plum curculio Redbanded leafroller San Jose scale Tarnished plant bug Tussock moth Variegated leafroller	1	1 (peaches) 3 (apricots & nectarines)	<p>Do not apply more than 6 quarts of this product per acre per application to apricots.</p> <p>For optimum scale control, apply when crawlers are present. For lesser peachtree borer, spray limbs and trunk thoroughly at weekly intervals during moth flight.</p> <p>For grasshopper control, refer to the general GRASSHOPPER section.</p>
Pecans	Black margined aphid Fall webworm Hickory shuckworm Lesser webworm Pecan leaf phylloxera	Pecan stem phylloxera Pecan nut casebearer Pecan spittlebug Pecan weevil Twig girdler Walnut caterpillar	1 to 2 1/2	0	<p>Do not apply more than 7.2 quarts of this product per acre per application.</p> <p>For grasshopper control, refer to the general GRASSHOPPER section.</p>
Pistachios	Navel orangeworm	1/2 to 2	14	<p>Do not apply more than 6 quarts of this product per acre per application.</p> <p>For brown soft scale, apply 4 to 6 quarts per acre per application.</p> <p>For dormant or delayed dormant timing, apply in combination with a recommended dormant oil.</p> <p>For grasshopper control, refer to the general GRASSHOPPER section.</p>	
	Brown soft scale	2			
Plums Prunes Cherries	Codling moth Eastern tent caterpillar	Orange tortrix Tussock moth	3/4	1	<p>Do not apply more than 6 quarts of this product per acre per application.</p> <p>For optimum scale control, apply when crawlers are present.</p> <p>For lesser peachtree borer control, spray limbs and tree trunks thoroughly at weekly intervals during moth flight.</p> <p>For grasshopper control, refer to the general GRASSHOPPER section.</p>
	Black cherry aphid Brown soft scale Cherry fruitworm Cherry maggot Eyespotted bud moth European earwig 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		

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CROP	INSECT		QUARTS OF SEVIN® BRAND XLR PLUS/100 GALS.	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
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 Fruitree 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 Woolly 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. For grasshopper control, refer to the general GRASSHOPPER section.
	Apple mealybug Apple aphid		1/2		
	Codling moth White apple leafhopper		1/2 to 1		
	Japanese beetle		3/4		
Walnut	Calico scale European fruit lecanium	Filbertworm Fruitree leafroller Frosted scale	1/2	0	For optimal coverage, 1000 gallons of dilute spray per acre are suggested for mature trees.
	Codling moth		1/2		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. Apply dilute sprays in 200-500 gallons of water per acre.
	European earwig		2		Spray tree trunks to point of run-off. For grasshopper control, refer to the general GRASSHOPPER section.

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, 25-100 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 boysenberries and loganberries)	European raspberry aphid	Leafrollers Rose chafer	1 to 2	7	For grasshopper control, refer to the general GRASSHOPPER section.
	Japanese beetle Leafhoppers	Snowy tree cricket			
	Omnivorous leafroller Raspberry sawfly		2		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. For grasshopper control, refer to the general GRASSHOPPER section.
Cranberries	Cutworms Cranberry fireworms Cranberry fruitworms Cranberry twig girdler	Elm spanworm Gypsy moth 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. For grasshopper control, refer to the general GRASSHOPPER section.
Grapes	European fruit lecanium Grape leaf folder Grape leafhopper	Western grapeleaf skeletonizer Western Yellowstriped armyworm	1 to 2	7	For grape leaf folder, apply before first brood larvae emerge from rolls.
	Cutworms Eight-spotted forester Grape berry moth Japanese beetles June beetles	Orange tortrix Omnivorous leafroller Redbanded leafroller Saltmarsh caterpillar	2		For grasshopper control, refer to the general GRASSHOPPER section.
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. For grasshopper control, refer to the general GRASSHOPPER section.

NON-RESIDENTIAL TREES AND ORNAMENTALS

For dilute sprays, apply the specified dosage per acre or per each 100 gallons of spray volume. For concentrate sprays, maintain the recommended rate per acre equivalent to that used in a dilute spray. The optimum spray gallonage will depend on the tree size, density and stage of growth. Typical spray gallonages per acre range from but are not limited to 100 - 600 gallons for dilute sprays, 20 - 100 gallons for concentrate sprays and 3 - 25 gallons for aerial sprays. Do not exceed maximum label rate per acre per application. 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. 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	Plant bugs
	Apple aphid	Holly leafminer	Poinsettia hornworm
	Amyworm	Jackpine	Psyllids
	Azalea leafminer	budworm	Puss caterpillar
	Bagworms	Japanese beetle	Redhumped oakworm
	Birch leafminer	Jeffrey pine	Rose aphid
	Blister beetle	needleminer	Rose chafer
	Boxelder bug	June beetles	Rose slug
	Boxwood leafminer	Lace bugs	Saddled prominent
	Brown tail moth	Leafhoppers	Sawfly (exposed)
	Cankerworms	Leafrollers	Scale insects
	Catalpa sphinx	Locust borer	Sowbugs
	Chiggers	Maple leafcutter	Spiney elm caterpillar
	Cutworms	Mealy bugs	Springtails
	Cypress tip moth	Mimosa webworm	Spruce needleminer
	Eastern spruce gall adelgid	Nantucket pine tip moth	Subtropical pine tip moth
	Elm leaf aphid	Oak leafminers	Tent caterpillars
	Elm leaf beetle	Oak moth	Thorn bug
	Elm spanworm	Oak skeletonizer	Thrips (exposed)
	Eriophyid mites	Oakworm	Ticks
European pine shoot moth	complex	Walnut caterpillar	
Fall armyworm	Oleander caterpillar	Webworms	
Flea beetle	Olive ash borer	Western hemlock looper	
Fuller rose beetle	Orange-striped oakworm	Willow leaf beetles	
Gall midges	Periodical cicada	Yellow poplar weevil	
Gall wasps	Pine looper		
Greenstriped mapleworm	Pine sawfly		
Grasshoppers	Pine spittlebug		
Hackberry nipplegall maker	Pitch pine tip moth		
	Cooley spruce gall adelgid	Spruce budworm	
	Douglas-fir tussock moth	Western spruce budworm	
	Balsam twig aphid	Wooly gall aphid	
	Gypsy moth		
	Ips engraver beetles	Roundheaded pine beetle	Western pine beetle
	Mountain pine beetle	Spruce beetle	
	Elm bark beetle		

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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.

CROP	INSECT	AMOUNT OF SEVIN® BRAND XLR PLUS		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 Lucern moth millipedes Mosquitoes (adults) Sowbugs Spittlebugs Springtails Ticks Yellowstriped armyworm	1 1/2 to 3	2 to 4	<p>For Armyworm, Cutworm and Fall Armyworm Control: Do not irrigate treated areas following insecticide application.</p> <p>For Green June Beetle Grub Control: Make applications when grubs are feeding near the soil surface. Water or irrigate turf grasses soon after treatment.</p>
	Chinch bugs Sod Webworm (lawn moths)		4.4 to 6	6 to 8	<p>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.</p> <p>For Sod Webworm Control: Do not irrigate treated areas following insecticide application.</p>
	Bluegrass billbug European crane fly Fleas White grubs (such as Japanese beetle, Chafer beetle and <i>Phyllophaga</i> spp. larvae)		6	8	<p>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.</p> <p>For White Grub Control: Applications should be made when grubs are feeding near the soil surface, usually during late March through My, or July to early September, or as recommended by local Agricultural Extension Service agents. Water or irrigate turf grasses thoroughly soon after treatment.</p>

CONTROL OF TICKS WHICH VECTOR LYME DISEASE

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

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

SITE	PEST	QUARTS OF SEVIN® brand XLR Plus/ACRE	SPECIFIC DIRECTIONS
Pastures, Rangeland, Wasteland, Rights-of Way, Hedgerows, Ditchbanks and Roadsides, Non-Residential Trees (Forests, Shelter belts and Plantations only)	<i>Ixodes</i> spp. Deer tick, Bear tick, and Black legged tick <i>Amblyomma</i> spp. Lone Star tick	1 to 2	Use the high rate for heavy tick infestations. Use higher spray volumes for dense ground cover or heavy leaf litter. 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.

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 areas 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 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.

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 concentration-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 table spoon (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)	<p>CAUTION: May kill shrimp and crabs. Do not use in areas where there are important resources.</p> <p>OBSERVE BEE CAUTION</p> <p>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.</p> <p>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.</p>
	25	<p>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.</p>

POULTRY INSECT CONTROL

POULTRY	INSECT	SPECIFIC DIRECTIONS
Chicken, Ducks, Geese, Game birds Pigeons, and Turkeys	Chicken mite Fleas Lice Northern fowl mite	<p><u>For use as a direct spray on birds by:</u></p> <p>1. Misting with Electric Fog Machine: Mix 1/3 quarts (9.6 ounces) of this product in 1 gallon of spray. Use 1 1/2 gallons per 1000 hens in cages, on litter or on slatted floors. Repeat in 4 weeks if necessary.</p> <p>2. Spraying with knapsack or cylinder type compressed air sprayers: Mix 1/5 quarts (6.4 ounces) of this product in 5 gallons of spray. Use 1 gallon per 100 hens in cages, on litter or on slatted floors. Repeat in 4 weeks if necessary.</p> <p>For Northern fowl mite control, ensure pressured spray penetrates feathers of vent area on birds.</p> <p>Direct mist spraying for chicken mite and fleas in a supplement to spraying roosts and buildings for control of these pests.</p> <p>Do not apply to poultry and game birds within 7 days of slaughter.</p>

POULTRY INSECT CONTROL (CONT.)

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POULTRY QUARTERS	QUARTS OF SEVIN® BRAND XLR PLUS/ EACH 100 GAL. OF WATER	SPECIFIC DIRECTIONS
Bed bugs Chicken mite Fleas Lice Northern fowl mite	4	Apply 1 to 2 gallons of spray mixture with conventional power spray or knapsack equipment 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 with conventional power spray or knapsack equipment per 1000 square feet of floor space, litter surface, walls, cracks, posts, crevices, and around ventilation areas to insulation. Optimum spray timing is immediately after flock is removed from the house when beetles are most active. Ventilate while spraying. Do not treat premises within 7 days of slaughter.

PEST CONTROL AROUND BUILDINGS
(FOR EXTERNAL USE AROUND BUILDINGS ONLY)
LIMITED TO PEST CONTROL OPERATORS ONLY

For use as an external perimeter treatment to prevent infestations of buildings, apply the specified dosage in a band 6 to 10 feet wide around the outside perimeter of the structure.

1 Tablespoon = 1/2 fluid ounce of SEVIN® brand XLR Plus Carbaryl Insecticide

INSECT	QUARTS OF SEVIN® BRAND XLR PLUS/ 100 GAL.	SPECIFIC DIRECTIONS
Ants Bees Brown dog tick Centipedes Cockroaches Crickets Earwigs Firebrats Fleas Millipedes Scorpions Silverfish Spiders Wasps	20 (6.5 oz./gallon)	Apply as a coarse wet spray in a band 6 to 10 feet wide around the outside perimeter of buildings. Confine applications to areas immediately adjacent to the building. Direct application to the structure should be minimal and restricted to cracks, crevices, and areas where insects tend to congregate. May be applied to outdoor sleeping quarters of pets. Do not treat animals. Staining may occur on certain surfaces such as stucco, brick, cinder block, and wood. Spray deposits on painted or stained surfaces or finishes (e.g. cars, house trailers, boats, etc.) should be immediately removed by washing to prevent discoloration. Avoid application to surfaces where visible spray residues are objectionable.

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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.

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

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