



GROUP	<b>1A</b>	INSECTICIDE
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Sevin® XLR

**CARBARYL INSECTICIDE LIQUID SUSPENSION**

For control of insect pests on forage, field, cereal, vegetable, tobacco and fruit crops

**COMMERCIAL  
READ THE LABEL AND BOOKLET BEFORE USING**



**REGISTRATION NO. 27876 PEST  
CONTROL PRODUCTS ACT**

Bayer CropScience Inc.  
Suite 100, 3131 114th Avenue S.E.  
Calgary, Alberta T2Z 3X2

**GUARANTEE:** Carbaryl 42.8% by wt.  
(Contains 466 grams carbaryl per litre)  
**WARNING,** contains the allergen soy.

Product Information : 1 888 283 6847

Contains 1,2-benzisothiazolin-3-one at 0.02%  
as a preservative.

In case of spills, poisoning or fire, telephone emergency response number 1-800-334-7577 (24 hours a day)

Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION is a suspension of microfine SEVIN carbaryl insecticide in an aqueous medium. It readily disperses in water to form a spray which may be applied by ground equipment or aerial equipment when specifically indicated for that crop. **READ THE LABEL. USE IN STRICT ACCORDANCE WITH DIRECTIONS AND CAUTIONS.**

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

**PRECAUTIONS:**

**KEEP OUT OF REACH OF CHILDREN.  
HARMFUL IF INHALED OR SWALLOWED.**

**IF SWALLOWED:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

Avoid breathing spray mist. Do not take internally. Avoid contact with skin and eyes. Wear regular long-sleeved work clothing. Change to clean clothing daily. Wash hands and face before eating. Wash thoroughly after handling. **AVOID CONTAMINATION OF FOOD, FEED, WATER SUPPLIES, STREAMS AND PONDS.** If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit Croplife Canada's website at: [www.croplife.ca](http://www.croplife.ca)

**FIRST AID:**

**TOXICOLOGICAL INFORMATION: NOTE  
FOR PHYSICIAN:**

Sevin XLR CARBARYL INSECTICIDE  
LIQUID SUSPENSION is a moderate, reversible  
cholinesterase inhibitor. Atropine is antidotal. Do  
not use 2-PAM opiates, or cholinesterase  
inhibiting drugs.

**STORAGE AND DISPOSAL:** Store unused  
Sevin XLR CARBARYL INSECTICIDE  
LIQUID SUSPENSION in original container  
only, in cool, dry area out of reach of children and  
animals. Do not store in areas where temperatures  
frequently exceed 38°C.

Do not contaminate water, food or feed by storage  
or disposal. Do not reuse empty container. Triple-  
or pressure-rinse the empty container. Add the  
rinsings to the spray mixture in the tank. Follow  
provincial instructions for any required additional  
cleaning of the container prior to its disposal.

Make the empty container unsuitable for further  
use. Do not burn container. Dispose of the  
container in accordance with local and provincial  
requirements. For further information on the  
disposal of unused, unwanted product, contact the  
manufacturer or the provincial regulatory agency.  
Contact the manufacturer and the provincial  
regulatory agency in case of a spill, and for clean-  
up of spills.

If container is damaged and/or contents spilled,  
contact manufacturer for instructions. Wear  
protective clothing, approved respirator and  
impervious gloves before handling spills or  
damaged product. For spills, do not allow product  
to spread. Prevent entry into ditches and  
waterways. Cover spill with sweeping compound  
and place contaminated material into an approved  
waste container. Place damaged container into  
waste containers and mark with contents.

**NOTICE TO USER:** This control product is to be  
used only in accordance with the directions on the  
label. It is an offense under the Pest Control  
Products Act to use this product in a way that is  
inconsistent with the directions on the label. The  
user assumes the risk to persons or property that  
arises from any such use of this product.

**NET CONTENTS: 10 LITRES**

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2007-5502  
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For control of insect pests on forage, field, cereal,  
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GUARANTEE: Carbaryl 42.8% by wt.  
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Product Information: 1 888 283 6847

Bayer CropScience Inc.  
Suite 100, 3131 114th Avenue S.E.  
Calgary, Alberta T2Z 3X2

NET CONTENTS: 10 LITRES

SEVIN is a registered trademark of Bayer CropScience

Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION is a suspension of micro-fine Sevin Carbaryl Insecticide in an aqueous medium. It readily disperses in water to form a spray which may be applied by ground equipment or aerial equipment when specifically indicated for that crop. **READ THE LABEL. USE IN STRICT ACCORDANCE WITH DIRECTIONS AND CAUTIONS.**

#### PRECAUTIONS:

**KEEP OUT OF REACH OF CHILDREN. HARMFUL IF INHALED OR SWALLOWED.** Avoid breathing spray mist. Do not take internally. Avoid contact with skin and eyes. Wear regular long-sleeved work clothing. Change to clean clothing daily. Wash hands and face before eating. Wash thoroughly after handling. **AVOID CONTAMINATION OF FOOD, FEED, WATER SUPPLIES, STREAMS AND PONDS.**

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit Croplife Canada's website at: [www.croplife.ca](http://www.croplife.ca) .

**BEE CAUTION:** This product is highly toxic to honey bees exposed to direct treatment on blooming crops or weeds. However, field studies have shown that Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION, while toxic to honey bees, is less hazardous than other carbaryl products when direct application to bees is avoided and the spray residues have dried. For maximum honey bee hazard reduction, apply Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION from late evening to early morning or when bees are not foraging. If application must be made during foraging periods, the following precautionary measures must be performed prior to treatment to minimize honey bee kill: notify beekeepers to: (1) confine the honey bees to the hive by covering the colony or screening the entrance; or (2) locate hives beyond honey bee flight range from the treated area. Precautionary measures may be discontinued after spray residues have dried. Leafcutter bees are more sensitive to insecticides than honey bees. Carbaryl applications should be avoided where these bees are foraging.

**PLANT RESPONSE PRECAUTIONS:** To avoid possible injury to tender foliage, do not apply to wet foliage or when rain or high humidity is expected during the next two days. Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION injures Boston ivy, Virginia creeper and Maidenhair fern. During early season, it may also injure Virginia and sand pines. Observe label instructions on apple thinning and on combinations with certain herbicides on soybeans.

#### FIRST AID:

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice. **IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

#### **TOXICOLOGICAL INFORMATION:**

**NOTE FOR PHYSICIAN:** Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION is a moderate, reversible cholinesterase inhibitor. Atropine is antidotal. Do not use 2-PAM opiates, or cholinesterase inhibiting drugs.

#### **STORAGE AND DISPOSAL:**

Store unused Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION in original container only, in cool, dry area out of reach of children and animals. Do not store in areas where temperatures frequently exceed 38°C.

Do not contaminate water, food or feed by storage or disposal. Do not reuse empty container. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. Follow provincial instructions for any required additional cleaning of the container prior to its disposal. Make the empty container unsuitable for further use. Do not burn container. Dispose of the container in accordance with local and provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean up of spills.

If container is damaged and/or contents spilled, contact manufacturer for instructions. Wear protective clothing, approved respirator and impervious gloves before handling spills or damaged product. For spills, do not allow product to spread. Prevent entry into ditches and waterways. Cover spill with sweeping compound and place contaminated material into an approved waste container. Place damaged container into waste containers and mark with contents.

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

#### **DIRECTIONS FOR USE:**

**IMPORTANT:** The directions on this label are based on tests and field experience relating to (a) effectiveness; (b) possible injury to plants and animals; and c) residues in food, meat and milk. Follow directions for most effective use.

#### **SPRAY PREPARATIONS FOR GROUND APPLICATION:**

**TO ASSURE A UNIFORM PRODUCT, AGITATE, STIR OR RECIRCULATE ALL Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION CONTAINERS 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 XLR CARBARYL INSECTICIDE LIQUID SUSPENSION and then the remaining volume of water. Include rinse water from container. Dilutions of 1 volume of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION with 1 volume of water will allow maximum resistance to wash off by rainfall or overhead irrigation. Dilutions higher than 1:39 are not recommended where residual insect control from wash off resistance is desired. Prepare only as much spray mixture as is needed on the day of mixing. MAINTAIN CONTINUOUS AGITATION DURING MIXING AND APPLICATION TO ASSURE A UNIFORM SUSPENSION. DO NOT STORE SPRAY MIXTURES OVERNIGHT.

#### AERIAL APPLICATION:

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rate and conditions of this label. Label rates conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment. Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

#### USE PRECAUTIONS:

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Application Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

#### OPERATOR PRECAUTIONS:

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted. It is desirable that the pilot have communication capabilities at each treatment site at the time of application. The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing label. All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

#### WASHOFF RESISTANCE AND COVERAGE:

Dilution of 1 volume of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION with 1 volume of water will allow maximum resistance to wash off by rainfall or overhead irrigation. Dilutions higher than 1:39 are not recommended when wash off resistance is desired. Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION spray must be properly diluted and droplets must dry on the foliage before they become wash off resistant. When atmospheric humidity is low, a drying time of at least one hour is generally adequate. Under high humidity a longer drying time may be required. Wash off resistance cannot be expected if Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION is applied to wet foliage which does not dry adequately 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 volumes higher than the 1:39 dilution. For example in hot, dry weather, or when humidity is low, higher spray volumes per hectare may be required to minimize loss from evaporation and ensure thorough coverage. Consult Provincial agricultural field representatives for recommendations regarding local pest and crop conditions, and the total spray volume required for effective coverage.

#### COMPATIBILITY:

Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION, when diluted with 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 of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION with another product and the resulting plant response is unknown, it should be tested on a small scale. Curdling, precipitation, greasing, layer formation or increased viscosity are symptoms of incompatibility. WHEN PREPARING COMBINATION SPRAYS, FIRST ADD Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION 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, EXCESSIVE RESIDUES OR PLANT INJURY.

Unstable under highly alkaline conditions. Not effective if used with alkaline materials such as Bordeaux, lime-sulfur and casein-lime spreaders.

#### APPLICATION:

On all crops, use sufficient spray volume to obtain thorough and uniform coverage. Calibrate spray equipment to deliver the required volume. The flow rate of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION diluted 1:1 with water is similar to water. Use 50 mesh strainers in spray system and behind nozzles. To clean spray system after use, drain and flush with water.

#### IMPORTANT PRE-HARVEST AND GRAZING USE INFORMATION AND LIMITATIONS:

Tolerances established under the Food & Drug Act permit the sale of crops bearing probable Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION residues when Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION is used in accordance with label directions. Pre-harvest and grazing use limitations are listed at the end of the directions for each crop use. Where no pre-harvest or grazing time limitations are stated, application can be made to the day of harvest and crops can be grazed without time delay if directions for use on the crop are followed. If Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION is used in accordance with label directions, forage and feed crops, including bean vines, carrot tops, hay, pea vines, and sugar beet tops, may be grazed or harvested for use as feed for dairy animals 48 hours after treatment and meat animals 24 hours after treatment without resulting in illegal residues in milk or meat.

#### INSECT CONTROL:

Apply when insects or their damage appear. To maintain control, repeat at 7 to 10 day intervals or as necessary unless a shorter interval is specified. Where a dosage range is indicated, use lower rate on young plants and early instars and higher rate on mature plants, advanced instars and adults. Thorough and uniform spray coverage is essential for effective control. Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION does not control spider mites. If spider mites are a problem, use a registered miticide.

#### RESISTANCE MANAGEMENT RECOMMENDATIONS:

For resistance management, please note that Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION contains a Group 1A insecticide. Any insect population may contain individuals naturally resistant to Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION Insecticide and other Group 1A insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action, but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION or other Group 1A insecticides with different groups that control the same pests in a field.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an integrated pest management (IPM) program that includes scouting and record keeping and considers cultural, biological, and other chemical control practices;
- Monitor treated pest populations for resistance development.
- Contact the local extension specialist or certified crop advisors for any additional pesticide resistance-management and IPM recommendations for the specific site and pest problems in the area.

For further information or to report suspected resistance, contact Bayer CropScience Inc. at 1-888-283-6847.



FORAGE, FIELD, CEREAL, VEGETABLE AND TOBACCO CROPS:

GROUND APPLICATION: Apply in sufficient volume to obtain through coverage. Where maximum wash off resistance is needed, use up to 1:1 (vol/vol) dilution with water. Do not dilute greater than 1:39 where wash off resistance is desired. To prepare small volumes of spray, use 20 mL of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION per 5 L of water where rates of 2.5 L/ha are indicated in the tables.

Crop	Insect	L of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION /ha	Pre-Harvest Interval (days)	Specific Directions
Ditchbanks Field borders Forage grasses Headlands Pastures Rangelands Rights-of-way Wastelands	Grasshoppers	1.2 - 2.3  2.3 - 3.5	0 (ditchbanks, field borders, headlands, rights-of-way, wasteland)  1 (forage grasses, pastures, rangeland, beef cattle)  2 (forage grasses, pastures, rangeland, dairy cattle)	For nymphs or sparse vegetation  For adults or application to dense vegetation.
Alfalfa Clover Oats Rye Wheat Barley	Blister beetles, Flea beetles, Leafhoppers, Three cornered alfalfa hopper  Alfalfa caterpillar, Armyworm, Webworms	2.5 - 4.0  2.5 - 5.25	2 (alfalfa & clover)  14 (Oats, rye, wheat)  28 (Barley)	Remove cattle from area when spraying. Re-introduce beef cattle after 1 day; dairy cattle 2 days  Apply when insects or their damage appear. Repeat in 7 to 14 days if necessary
Asparagus, (seedlings, spears)	Asparagus beetle, Cutworms (climbing)	2.5 - 6.4	2	Apply as a spray in sufficient water for full coverage. Apply when insects or their damage

				appear. Use the lower rate on young plants. Repeat at intervals of 7 to 10 days or as necessary. Do not treat more often than once every 3 days.
Beans	Mexican bean beetle	1.25 - 1.5	5	Use lower rate on young plants. Apply for full coverage when insects or damage appear. Repeat at intervals of 7 to 10 days or as necessary.  Apply when insects or their damage appear. Use at least 220 to 350 L of water per hectare. Spray in 25 to 30 cm band over row
	Flea beetles, Leafhoppers	2.5		
	Lygus bugs, Stink bugs	5.25 - 6.4		
	Climbing cutworms	30 - 35 mL/100 m of row		
Beets Broccoli Brussels sprouts Cabbage Carrots Cauliflower Celery Chinese cabbage Dandelion Endive Horseradish Kale Kohlrabi Lettuce Mustard greens Parsley Parsnip Radish Rutabaga Salsify Spinach	Flea beetles, Leafhoppers  Armyworms, Corn earworm, Diamondback moth (larvae), Imported cabbageworm, Lygus bugs, Meadow spittlebug, Stink bugs  Six spotted leafhopper	1.25 - 2.5  2.5 - 5.25  1.08-1.56	1 (carrots)  3 (Cabbage, cauliflower)  5 (broccoli, Brussels sprouts, celery, head lettuce & kohlrabi)  7 (beet roots, horseradish, radish, rutabaga roots, salsify roots and turnip roots)  14	Spray in sufficient water for full coverage. Use the lower rate on young plants. Apply when insects or damage appear. Repeat at intervals of 7 to 10 days or as necessary.  To avoid possible injury on lettuce, do not apply when foliage is wet or when rain or excessive humidity is expected during the next 2 days.

Swiss chard Turnip Watercress			(parsnip)  21 (beet tops, Chinese cabbage, dandelion, endive, kale, leaf lettuce, mustard greens parsley, salsify tops, spinach, Swiss chard, turnip tops & watercress)	
Corn (field & sweet	Corn earworm, Northern corn rootworm (adults), European corn borer, Fall armyworm          Grasshoppers  Cutworms (climbing)	2.5 - 4.0          1.25 – 2.5  45 ml/ 100 m of row	1	For larvae in whorls and for foliage feeders, treat the entire plant. Repeat as necessary. For insects attacking silks and ears, apply at intervals of 2 to 4 days starting when first silks appear and continuing until silks begin to dry. Three or more applications may be required depending on the severity of the infestation. Timing and good coverage are essential for effective control.          Spray in 25 to 30 cm band over row. Use at least 220 -275 L/ha water.
Cucumber Melons Pumpkin Squash	Cucumber beetle, Cutworms (climbing), Flea beetle, Leafhoppers,	2.5	5	Apply for thorough coverage when insects or damage appear. Repeat at intervals of 7 to 10 days or as necessary. To avoid

	Squash bug			possible injury on tender foliage, do not apply when foliage is wet or when rain or excessive humidity is expected during the next 2 days.
Peas	Alfalfa looper	4.7	3	Apply for thorough coverage when insects or damage appear. Repeat at intervals of 7- 10 days or as necessary.
Potato Tomato Eggplant Pepper	Colorado potato beetles*, Flea beetles, Leafhoppers European corn borer, Fall armyworm, Tomato hornworm, Tomato fruitworm  Stink bugs, Tarnished plant bug  Cutworms (climbing)	1.25 2.5 2.5 2.5 - 5.25  5.25 - 6.4  45mL/100m of row	2 (eggplant, pepper and tomato)  7 (potato)	Apply for full coverage when insects or damage appear. Repeat at intervals of 7 to 10 days or as necessary.  *As Colorado potato beetle resistance to carbaryl has been known to occur, it is recommended that the level of resistance of local Colorado potato beetle be established by using a dip test early in the season, before spraying.  Apply when insects or their damage appear. Use at least 225 to 275 L of water per hectare. Spray in 25 to 30 centimetre band over the row.
Rapeseed (Canola)	Flea Beetles	0.5	Seedling Application only	Applications may be made up to four weeks following plant emergence.
Sweet white Lupin	Blister beetle	2.5 - 4.0	28	Use sufficient water for full coverage. Repeat application when insects or their damage appear. Do not make more than 3 applications

	Grasshoppers	1.2 - 2.3  2.3 - 3.5		in one season.  For nymphs or sparse vegetation.  For adults or application to dense vegetation.
Snapbeans (such as common, green, yellow)	European corn borer	5.25	5	Apply after blossom when egg laying for second brood of corn borer begins. Repeat if needed at 7-day intervals. Use at least 10 L of finished spray for aerial application and at least 30 L of finished spray/ha for concentrated ground application. Careful monitoring for eggs is essential for determining optimum time for spray treatment.
Tobacco	Tobacco flea beetle  Cutworms  Flea beetles, Hornworms, Tobacco budworm	150 - 175 mL in 33 L spray volume per 100 m <sup>2</sup>  5.25  2.0 - 2.75	1	IN PLANT BEDS: apply when insects or damage appear.  POST-PLANT TREATMENT: Apply in a 25 cm band over the row as a foliage spray.  IN FIELDS: use 500 to 1000 L spray volume per hectare. use lower rate on young plants. Full coverage is essential. Begin treatment when larvae are small. Repeat as needed. Avoid excessive application in bud of plant as injury may result. If late applications are

				necessary, allow 3 days before priming or cutting.
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**FORAGE, FIELD, CEREAL, VEGETABLE AND TOBACCO CROPS:**

**AERIAL APPLICATION:** Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rate and conditions of this label.

Crop	Insect	L of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION /ha	Pre-Harvest Interval (days)	Specific Directions
Alfalfa Clover Oats Rye Wheat Barley	Flea Beetles  Grasshoppers	2.5 - 4.0  1.25 - 2.5	2 (alfalfa and clover)  14 (oats, rye & wheat)  28 (Barley)	Remove cattle from area while spraying. Re-introduce beef cattle after 1 day; dairy cattle after 2 days.  Apply when insects or their damage appear. Repeat in 7 to 14 days if necessary.
Corn (field & sweet)	Corn earworm, Northern corn rootworm (adults), European corn borer, Fall armyworm  Grasshoppers	2.5 - 4.0  1.25 - 2.5	1	For larvae in whorls and for foliage feeders, treat the entire plant. Repeat as necessary. For insects attacking silks and ears, apply at intervals of 2 to 4 days starting when first silks appear and continuing until silks begin to dry. Three or more applications may be required depending on the severity of the infestation. Timing and good coverage are essential for effective control.
Rapeseed (canola)	Flea Beetles	0.5	Seedling Application only	Applications may be made up to four weeks following plant emergence.

TREE FRUIT CROPS:

SPRAY VOLUME: For dilute sprays apply the specified dosage per 1000 L of water. For concentrate sprays, increase the concentration of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION in the spray mixture to apply an amount per hectare equivalent to that in a dilute spray. The optimum spray volume will depend on tree size, density and stage of growth. Typical spray volumes per hectare range from 2000 - 3000 L/ha for dilute sprays and 300 - 1000 L/ha for concentrate sprays. Do not exceed maximum label rate per hectare per application. Ground application only.

Crop	Insect	L of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION /ha	Pre-Harvest Interval (days)	Specific Directions
Apples Pears	Apple leafhopper Apple leafroller, Codling moth, Eyespotted bud moth, Mealybug, Redbanded leafroller (1st brood)	3.1	11	To avoid undesired apple thinning delay use until at least 30 days after full bloom.
	Apple maggot, Eastern tent caterpillar, Fruittree leafroller, Green fruitworm, Lecanium scale, Oystershell scale, Pearleaf blister mite, Pear psylla, Pear slug, Pistol casebearer, Plum curculio, Redbanded leafroller (2nd brood), Rust mites, San Jose scale, Tarnished plant bug, Tentform leafminer, Woolly apple aphid	6.25		Apply for full coverage as directed in your Provincial spray calendar. For optimum scale control, apply when crawlers are present.  For psylla control, apply when eggs hatch or when young nymphs are present. For optimum maggot control, apply at 10 day intervals.

<p>Apricots Peaches</p>	<p>Cat-facing insects, Codling moth, European earwig, European fruit lecanium, Fruittree leafroller, Lesser peachtree borer, Oriental fruit moth, Peach silver mite, Peach twig borer, Plum curculio, Redbanded leafroller, Scale insects</p>	<p>6.25</p>	<p>5 (apricots)  1 (peaches)</p>	<p>Apply for full coverage in normal spray schedules.</p> <p>For lesser peachtree borer, spray limbs and trunk thoroughly.</p> <p>For scale insects, apply when crawlers are present.</p>
<p>Cherries Plums</p>	<p>Codling moth, Eastern tent caterpillar, Oak leafhopper, Prune leafhopper</p> <p>Apple maggot, Black cherry aphid, Cherry fruitfly, Cherry fruitworm, Eyespotted bud moth, Fruittree leafroller, Lesser peachtree borer, Mealy plum aphid, Peach twig borer, Plum curculio, Redbanded leafroller, Scale insects</p>	<p>3.1 - 4.7</p> <p>6.25</p>	<p>2</p>	<p>Apply for full coverage in normal spray schedules.</p> <p>For scale insects, apply when crawlers are present.</p> <p>For lesser peachtree borer, thoroughly spray limbs and trunk area.</p>



TO REDUCE FRUIT SET — APPLE TREES (FRUIT):

Crop	L of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION /ha	Pre-Harvest Interval (days)	Specific Directions
Apple Thinning	0.05 – 0.1 (50 – 100 mL)  0.1 – 0.2 (100 – 200 mL)	75	<p>Apply in one full coverage spray timed between 10 and 25 days after full bloom. If factors such as tree age, variety, nutrition, previous crop pruning, bloom and degree of set favour excessive fruit thinning with Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION, exercise caution to avoid possible yield reduction.</p> <p>Dilute Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION with 100-200 L water/ha and apply by high volume gun or air blast sprayer.</p> <p>For easily thinned varieties including Cortland, Grimes, Jonathan, McIntosh, Orleans, Rome Beauty, Puritan, Red Delicious, Winesap and Yellow Newton.</p> <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>

SMALL FRUIT CROPS:

SPRAY VOLUME: Recommended dosages refer to litres of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION per hectare. Optimum spray volume will depend on tree size, density and stage of growth. Dilute Sprays - Typical spray volumes are 1000 - 3000 L/ha. Concentrate Sprays - Typical spray volumes are 300 - 1000 L/ha. Aerial sprays – Typical spray volumes are 100 – 200 L/ha. Do not exceed maximum label rate per hectare per application. Ground application only unless otherwise indicated.

Crop	Insect	L of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION /ha	Pre-Harvest Interval (days)	Specific Directions

Blackberries Boysenberries Dewberries Loganberries Raspberries	Blackberry leafminer, Japanese beetle, Leafhoppers, Leafrollers, Rose stem girdler, Spotted-winged raspberry aphid	5.25	11	Use 1000 to 2000 L spray volume per hectare. Apply when insects or damage appear. Repeat at intervals of 7 to 10 days or as necessary.
Blueberries	Blueberry maggot, Cranberry fruitworm, Lecanium scale, Leafrollers, Bruce spanworm	4.0	2	Use 1200 to 1500 L spray volume per hectare. Apply when insects or damage First appear. Apply 3 weeks before harvest and repeat in 10 days or as necessary. Avoid spraying during flowering. May be applied by air.
Cranberries	Bluntnosed cranberry leafhopper, Cranberry fruitworm, Cutworms (climbing), Fireworms	6.4 - 7.6	2	Use 3000 L spray volume per hectare. Apply during late bloom. Repeat as necessary at intervals of 7 to 10 days. May be applied by air.
Grapes	Grapeberry moth Leafhoppers	5.25 - 6.4	5	Use 2000 L spray volume per hectare. Apply for full coverage when insects or damage appear. Follow local government recommendations for proper timing.
Strawberries	Meadow spittlebug Strawberry leafroller	2.5 - 5.8	2	Use 1000 to 2000 L spray volume per hectare. Apply when insects or damage appear. Repeat at intervals of 7 to 10 days or as necessary

**SHELTERBELTS:**

Crop or Site	Insect	L of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION /1000 L water	Specific Directions

Chokecherry Shelterbelts	Prairie Tent Caterpillar	1.058	Apply prior to flowering when tents are visible, generally mid to late May
	Ugly Nest Caterpillar,		Apply after flowering when tents are visible, generally early to mid June
	Fruittree Leafroller		Apply after flowering when damage is first noted, generally early to mid June
<p>Apply as a foliar spray; ground application only – ONE application per year.  Apply so leaves are wet but not dripping.  Wear protective clothing including long-sleeved shirt, long pants and chemical resistant gloves when handling or spraying the product.</p>			

#### MOUNTAIN PINE BEETLE CONTROL:

For use on high value trees in urban and rural areas. To prepare small volumes of spray, use 1 L of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION per 25 L of water to make a spray mixture containing 2% active ingredients. Ground application only.

Litres of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION /1000 L of water	Specific Directions
40	<p>Effective as a preventive treatment only. Repeat annually as required to prevent beetle attacks. Avoid spraying when conditions favour drift from spray area.</p> <p>Apply one (1) L of spray per one (1) m<sup>2</sup> of bark in late May to early July or prior to beetle attack. Treat trunks from ground level up to until trunk diameter is less than 12.5 cm.</p>

#### RESTRICTED USE

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

**NATURE OF RESTRICTION:** This product is to be used only in the manner authorized; consult provincial regulatory authorities about use permits which may be required.

**RESTRICTED USE:** For use to control small infestations of mountain pine beetle in lodgepole pine forest stands.

**DIRECTIONS FOR USE:**

To be used only on trap trees (standing, dead or dying) which are not to be harvested. Monitor stand in the period mid-June to mid-July to determine which trees are infested. Apply 1 treatment to infested trees more than 3 weeks prior to the expected beetle emergence in order to kill the emerging adult beetles.

Mix 1 litre of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION in 24 litres of water (41.6 litres of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION in 1000 litres of water) to make a spray mixture containing 2% active ingredient by weight.

Apply 1 litre of spray per square metre of bark using a backpack handheld or suitable hydraulic ground sprayer. Treat bole from ground level up to a height of at least 3 metres of until bole is less than 12.5 centimetres in diameter. Avoid spraying when conditions favour drift from spray target.

**LIMITATIONS:** Consult provincial regulations and obtain all necessary permits and applicator certificates prior to making applications.

**GYPSY MOTH CONTROL:**

**RESTRICTED USE**

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

**NATURE OF RESTRICTION:** This product is to be used only in the manner authorized; consult provincial regulatory authorities about use permits which may be required.

**RESTRICTED USE:** Aerial application for the control of gypsy moth in forests and woodlands.

**DIRECTIONS FOR USE:** Use 2.3 litres of Sevin XLR CARBARYL INSECTICIDE LIQUID SUSPENSION per hectare. Apply a total spray volume of 3 to 5 litres per hectare. Apply when larvae are in early instars and leaves are at least one-third grown.

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