



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

JAN 31 1994

**Beverly Randall
UNIVERSAL COOPERATIVES INC.
AGENT FOR: AGWAY INC
BOX 460
MINNEAPOLIS MN 55440**

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

**Subject: Label Amendment Submission of 07/22/93 in Response to PR Notice 93-7
EPA Reg. No. 8590-419
SEVIN 4F AGRICULTURAL INSECTICIDE**

Dear Registrant:

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

WHAT THIS ACCEPTANCE MEANS:

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

WHAT YOU NEED TO DO NEXT:

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

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



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

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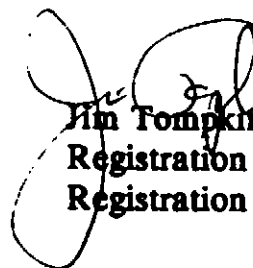
Submit the final printed labeling via the U.S. Postal Service to:

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

50128

**AGWAY
SEVIN * 4F AGRICULTURAL INSECTICIDE**

**An Aqueous suspension containing 4 pounds of carbaryl Insecticide per gallon.
For aerial or ground application.**

ACTIVE INGREDIENTS:

Carbaryl (1-Naphthyl N-Methylcarbamate).....	42.6%
INERT INGREDIENTS.....	<u>57.4%</u>
TOTAL:	100.0%

Sevin* is the registered trademark of Rhone Poulenc for carbaryl insecticide.

KEEP OUT OF REACH OF CHILDREN (12 pt.)

CAUTION (18 pt.)

See additional precautionary statements on side panel.

EPA REG. NO 8590-419

EPA EST. 1386-OH-1

**AGWAY, INC.
P.O. BOX 4741
SYRACUSE, NY 13221**

**ACCEPTED
with COMMENTS
EPA Letter Dated**

JAN 31 1994

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
8590-419

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

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

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

ANTIDOTE STATEMENT

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

Personal Protective Equipment:

Applicators and other handlers must wear:

- A. Long-sleeved shirt and long pants
- B. Waterproof gloves
- C. Shoes plus socks
- D. Chemical-resistant headgear for overhead exposure

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:

Users should: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

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.

STATEMENT OF PRACTICAL TREATMENT
N-Methyl Carbamate

GENERAL

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

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

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

IF ON SKIN: Wash thoroughly with soap and water.

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

NOTE TO PHYSICIAN:

Carbaryl is a N-methyl carbamate insecticide, which is a cholinesterase inhibitor. Overexposure to this substance may cause toxic signs and symptoms due to stimulation of the cholinergic nervous system. These effects of overexposure are spontaneously and rapidly reversible. Gastric lavage may be used if this product has been swallowed. Carbaryl poisoning may occur rapidly after ingestion and prompt removal of stomach contents is indicated.

Specific treatment consists of parenteral atropine sulfate. Caution should be maintained to prevent overatropinization. Mild cases may be given 1 to 2 mg intramuscularly every 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.

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. Do not contaminate water by cleaning of equipment or disposal of wastes.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. 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
- Waterproof gloves
- Shoes plus socks
- Chemical-resistant headgear for overhead exposure

PRODUCT INFORMATION:

Sevin 4F is an extremely fine dispersion of Sevin in water. The dilute spray is tenacious and quick setting, giving an adhesive residue to plants on partial drying. The product readily disperses in water to form a spray which may be applied by air or ground.

OBSERVE THE FOLLOWING USE PRECAUTIONS:

Read all label directions before using.

Sevin is unstable under highly alkaline conditions. Do not use with lime, bordeaux, lime-sulfur, casein lime spreaders or other alkaline materials.

Sevin has been used without plant injury ^{with} common insecticides and fungicides, except where mixtures have contained a number of pesticides, or under adverse conditions such as high humidity, drought, improper fertilization, etc. Do not combine with emulsifiable liquids, wettable powders, nutrients or adjuvants (or with more than one other pesticide) unless previous use

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of the mixture has proven compatible and safe to plants. Compatibility can be affected by water in your locality or ingredients in other products. Do not apply if physically incompatible.

PREHARVEST AND GRAZING USE INFORMATION & LIMITATIONS

Tolerances established under the Federal Food, Drug, and Cosmetic Act permit the sale of crops bearing probable carbaryl residues when this product is used in accordance with label directions. If used as directed, treated forage may be grazed or used as feed for dairy and meat animals without causing illegal residues in meat or milk. This product may be applied up to and including the day of harvest or grazing of forage crops. Application may be made without removing livestock from area being treated.

Do not apply or allow to drift to areas occupied by unprotected humans or beneficial animals or onto adjoining food, fiber or pasture crops. THE GROWER IS RESPONSIBLE for residues on his crop as well as for damage caused by drift from his property to that of others.

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Consult State Agricultural Extension Service or State Agricultural Experiment Stations for additional information, as the timing number of applications will vary with local conditions.

PLANT RESPONSE PRECAUTIONS

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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 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.

INSECT CONTROL

Apply when insects or their damage appears. To maintain control repeat at 7 to 14 day intervals or as necessary unless a shorter interval is specified below. Where a dosage range is indicated, use 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.

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Apply in sufficient spray volume to obtain thorough coverage. Where maximum washoff resistance is needed, use up to a 1:1 (vol/vol) dilution with water. Do not dilute greater than 1:11 where washoff resistance is desired.

This product does not control spider mites.

If spider mites are a problem, use a registered miticide. ~~Treated areas may be reentered immediately after the spray has dried.~~

FORAGE, FIELD AND VEGETABLE CROPS

Use at least 1 gallon of finished spray per acre for aerial application and at least 3 gallons of finished spray per acre for concentrate ground application. To prepare small volumes of spray, use 1 tablespoonful (1/2 fluid ounce) per gallon of water where rates of 1 quart per acre or 1 quart per 100 gallons are indicated in the tables below.

Unless otherwise specified, rates are in terms of Sevin 4F per acre in sufficient water for thorough coverage.

Days as pre-harvest interval are indicated in () after crop.

Alfalfa, Clovers:

Blister beetles, Mexican bean beetle. Use 1 to 2 pts. Alfalfa caterpillar, bean leaf beetle, cucumber beetles, green cloverworm, Japanese beetle, leafhoppers, three-cornered alfalfa hopper, thrips, velvet bean caterpillar. Use 2 pts. Armyworms, corn earworm, stink bugs, webworms. Use 2 to 3 pts. Alfalfa weevil - Use 2½-3 pts. (Eastern States) and 2 pts. (Western States) for control of alfalfa weevil larvae in the spring. If pre-treatment damage

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100-30 CHARACTERISTICS
100-30 CHARACTERISTICS

is extensive, cut the alfalfa and make the application to the stubble. Cutworms - Use 3 pts.

Application: To avoid 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. (Alfalfa - 3 1/5 pts., Clover - 3 pts.) Do not apply within 3 days of harvest on alfalfa.

Asparagus:

Asparagus beetle on seedlings or spears. Use 2 to 4 pts.

Application: Do not apply more often than once every 3 days. Do not apply within 1 day of harvest. (4 pts.) Post-harvest: Asparagus beetle and apache cicada on ferns or brush growth. Use 4 to 8 pts. (8 pts.)

Beans (Green, Lima, Snap, Cowpeas, Black-eyed

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Peas):

Mexican bean beetle. Use 1 pt. Bean leaf beetle, cucumber beetles, flea beetles, Japanese beetle, leafhoppers, velvet bean caterpillar, western bean cutworm. Use 2 pts. Armyworms, cutworms, corn earworm, stink bugs, tarnished

plant bugs. Use 2 to 3 pts. Cowpea curculio (on cowpeas only), Use 4 pts.

Application: Apply 4 applications beginning at first bloom and at 5 day intervals thereafter. Do not apply within 3 days of harvest on cowpeas.

Carrots, Chinese Cabbage, Collards, Dandelion, Endive (Escarole), Garden Beets, Horseradish, Kale, Lettuce, Mustard Greens, Parsley, Parsnips, Radishes, Rutabagas, Salsify, Swiss Chard, Turnips:

Flea beetles, harlequin bug, leafhoppers.

Use 1 to 2 pts. Six-spotted leafhopper (aster yellows vector). Use 2 to 3 pts. on a 5 to 7 day schedule. Armyworms, imported cabbage worm, diamond-back moth larvae and loopers, corn earworm, tarnished plant bug, stink bugs. Use 2 to 4 pts.

Application: For optimum control of corn earworm after lettuce heads begin to form, use 4 pts. in a 5 to 7 day schedule. Where cabbage looper is the principal problem, use an alternative pesticide that is specifically recommended. For control of small cabbage loopers in commercial plantings after edible portions begin to

PKA - 28-CHARACTERS
AL-78 - 10-CHARACTERS

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form, use 2 to 4 pts. in a 5 to 7 day schedule. 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. Do not apply within 3 days of harvest of head lettuce, garden beets (roots), horseradish, radishes, parsnips, rutabagas, salsify (roots), and turnips (roots). Do not apply within 14 days of harvest of chinese cabbage, collards, dandelion, endive (escarole), garden beets (tops), kale, leaf lettuce, mustard greens, parsley, salsify (tops), spinach, swiss chard and turnips (tops), (4 pts.)

Cole Crops (Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Kohlrabi):

Flea beetles, harlequin bug, Use 1 to 2 pts.
 Armyworms, imported cabbage worms, diamond back larvae and loopers, corn earworm. Use 2 to 4 pts. Where cabbage looper is the principal problem, use an alternative pesticide that is specifically recommended. For control of small cabbage loopers in commercial plantings after edible portions begin to form, use in a 5 to 7 day schedule. Do not apply within 3 days of harvest. (4 pts.)

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Corn:

Corn earworm, corn rootworm adults, European corn borer, fall armyworm, flea beetles, Japanese beetle, leafhoppers, sap beetles. Use 2 to 4 pts. For larvae in whorl (budworm damage) and foliage feeders, apply to entire plant - repeat as necessary. For insects attacking silks and ears, apply at 2 to 3 day intervals starting when first silks appear and continuing until silks begin to dry. Three or more applications may be required depending on severity of infestation. Timing and good coverage are absolutely essential for effective control. Cutworms - use 4 pts. Application to the tassel region of corn during the pollen shed period will seriously reduce bee populations. (4 pts.)

Cucumbers, Melons, Pumpkins, Squash:

Melonworm, pickleworm, use 1 to 2 pts. Cucumber beetles, flea beetles, leafhoppers, squash bugs, use 2 pts.

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Application: Avoid excessive application. To avoid 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. (2 pts.)

Forage Grasses and Pasture:

Armyworms, thrips.. Use 2 to 3 pts. For thrip control in grasses grown for seed, high spray pressure may help penetrate into root. (3 pts.)

Garden Peas:

Colorado Potato beetle, leafhoppers, use 2 pts. For Colorado potato beetle control apply to weeds in fields to help prevent contamination in processed peas. Armyworms, grasshoppers, use 2 to 3 pts. (5 1/5 pts.)

Peanuts:

Blister beetles, use 1 to 2 pts. Alfalfa caterpillar, bean leaf beetle, cucumber beetles, green cloverworm, Japanese beetle, leafhoppers, three cornered alfalfa hopper, thrips, velvet bean caterpillar, use 2 pts. Armyworms, corn earworm, stink bugs, webworms, use 2 to 3 pts. To avoid 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. (3 pts.)

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Potatoes, Tomatoes, Eggplants, Peppers:

Colorado potato beetle, flea beetles, leafhoppers. Use 1 to 2 pts. European corn borer

fall armyworm, lace bugs, stink bugs, tarnished plant bugs, tomato fruitworm, tomato hornworm, Use 2 to 4 pts. Cutworms (on potato, tomato, eggplant), use 4 pts. (4 pts.)

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Soybeans

Blister beetles, Mexican bean beetle - Use 1 to 2 pts. Alfalfa caterpillar, bean leaf beetle, cucumber beetles, green cloverworm, Japanese beetle, leafhoppers, three-cornered alfalfa hopper, thrips, velvet bean caterpillar. Use 2 pts. Armyworms, corn earworm, stink bugs, webworms, use 2 to 3 pts.

Application: To avoid 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. WARNING! Do not apply in combination with 2,4-DB herbicide (such as "Butyrac" 175 or "Butoxone" SB). (3 pts.)

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Sugar Beets:

Armyworms, leafhoppers, webworms, use 2 to 4 pts.

Application: Do not apply within 14 days of harvest.

Tobacco:

IN PLANT BEDS: Tobacco flea beetle, Use 4
tablespoonfuls per gal. or 2 pts. per 50 gals.
water and apply 6 gals. per 100 sq. yds.
Green June beetle grubs, use 1 pt. per 100 gals.
water.

Application: Apply when insects or damage appear
to areas that larvae have uprooted only by
sprinkling as a drench with 50-100 gals. per
100 sq. yds. May be applied before or after
seeding. Avoid excessive application; plant
injury may result. IN FIELDS: Cutworms, flea
beetles, Japanese beetles, June beetles,
hornworms, use 2 to 4 pts.

Application: Use lower rate on young plants
up to knee high; higher rate on mature
plants, Use at least 10 gallons per acre of
the prepared spray. Begin treatments when
worms are small. Avoid excessive application
in plant bud as injury may result. Treated
fields may be entered immediately after foliage
has dried. If late applications are necessary
allow 3 days before priming or cutting. (4-
1/2 pts.)

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FRUIT AND NUT CROPS

Unless otherwise specified, rates are in terms of Sevin 4F per 100 gallons of dilute spray. If concentrate sprayers are used, the amount per 100 gallons should be adjusted in order to apply the same quantity of active ingredient per acre. Make first application when insects appear or damage is observed. Repeat as necessary.

SITE	INSECT	Qt/100 Gal.	PREHARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS	
Apples Pears	Apple aphid Apple maggot Apple rust mite Apple sucker Bagworms California pearslug (Dear sawfly) Eastern tent caterpillar European apple sawfly Eyedoned bud moth Forbes scale Fruitree leafroller Green fruitworm Gypsy moth Japanese beetle Lecanium scales Lesser appleworm	Lycus bugs Crange tonrix Oystershell scale Pearleaf bister 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	$\frac{1}{4}$ to 1	1	OBSERVE BEE CAUTION To avoid undesired apple thinning, delay use until at least 30 days after full bloom. For psylla control, apply when eggs hatch or young nymphs are present. To control scale insects, apply when crawlers are present.
	Apple mealybug Apple aphid C. King moth	White apple leafhopper	$\frac{1}{2}$		

Application: When heavy aphid infestations are present, repeated applications may be necessary for optimum control. To control rosy apple aphids, apply before leaves are curled. For optimum scale control, apply when crawlers are present. Apply at 10 day intervals for apple maggot control. Applications within 30 days

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after bloom may also provide apple thinning. To avoid this, delay use until at least 30 days after full bloom. May cause foliar injury if used before second cover on York and McIntosh apples. Do not apply within 1 day of harvest. (24 pts.)

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Apple Thinning:

Many factors influence the degree of apple thinning obtained with Sevin. These include tree age, variety and nutrition, previous crop, pruning, degree of set, bloom, weather and use of other chemical thinners. When any of these favor reduce fruit set, caution should be observed in applying so that excessive thinning and possible yield reduction will not occur. Use 1/2 to 1 pt. on easily-thinned varieties. Apply for full coverage. Use 1 to 2 pts. on hard-to-thin varieties.

Application: Apply in one spray timed between 10 and 25 days after full bloom. Easily-thinned varieties include: Cortland, Grimes, Jonathan, McIntosh, Orleans, Puritan, Red Delicious, Rome Beauty, Winesap, and Yellow Newton. Difficult-to-thin varieties include Baldwin, Ben Davis, Dutchess, Early McIntosh, Golden Delicious,

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Lady Apple, Northern Spy, Rhode Island Greening, Steele Red, Turley, Wealthy, Yellow Transparent and York Imperial.

CROP	INSECT	QT./100 GAL.	PREHARVEST INTERVALS (DAYS)	SPECIFIC DIRECTIONS
Peaches Apricots Nectarines	Apple pandemics Codling moth Cucumber beetles European earwig Fruitree leafroller Gypsy moth Japanese beetle June beetles Lacanium 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 moths Variegated leafroller	1	1 (peaches) 3 (apricots & nectarines)	For optimum scale control, apply when crawlers are present. For lesser peachtree borer control, spray limbs and trunk thoroughly at weekly intervals during moth flight.

Application: For optimum scale control, apply when crawlers are present. For lesser peach tree borer control, spray limbs and trunk thoroughly, weekly during moth flight. Do not apply within 1 day of harvest of peaches. 3 days of harvest of apricots and nectarines. (16 pts.)

Blackberries, Boysenberries, Dewberries, Loganberries, Raspberries:

Japanese beetle, leafhoppers, leaf rollers, raspberry aphid. Use 4 pts. per acre.

Application: A dilute spray of 100-200 gals. water per acre is suggested. Do not apply within

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7 days of harvest. (4 pts.)

Blueberries:

Blueberry maggot, European fruit lecanium, fruitworms (cherry, cranberry), Japanese Beetle. Use 3 to 4 pts. per acre. A dilute spray of 125-150 gals. water per acre is suggested.

Application: Apply 3 weeks before harvest and repeat 10 days later or as necessary. (4 pts.)

CROP	INSECT		QUARTS SEVIN [®] / 100 GAL.	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Plums Prunes Cherries	Codling moth Eastern tent caterpillar	Orange tortrix Tussock moth	2		
	Black cherry aphid Brown soft scale Cherry fruitworm Cherry maggot European earwig Evesooned bud moth Forbes scale Fruitree 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 chaler San Jose scale Variegated leafroller	1	1	For optimum scale control, apply when crawlers are present. For lesser peachtree borer control, spray limbs and trunk thoroughly at weekly intervals during moth flight.

Application: For optimum scale control, apply when crawlers are present. For lesser peach tree borer control, spray limbs and trunk thoroughly, weekly during moth flight. Do not apply within 1 day of harvest. (12 pts.)

ADVERTISING AND SALES PROMOTION SERVICES

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COPY

FOR: SEVIN 4F

DATE: 2/11/87

Cranberries:

Cutworms, fireworms, Japanese beetle, leafhoppers.

Use 3 to 6 pts. per acre. A dilute spray of 300 gals. water per acre is suggested.

Application: Apply in late bloom and as needed at 7 to 10 day intervals. Do not apply within 1 day of harvest. (6 pts.)

Grapes:

European fruit lecanium, grape leaf folder, grape leafhoppers, grape leaf skeletonizer. Use 2 to 4 pts. per acre. Grape Berry Moth, Japanese beetle, June beetles, red-banded leaf roller. Use 4 pts. per acre. A dilute spray of 200 gals. water per acre is suggested.

Application: Spray just before first brood leaf folder larvae emerge from rolls and as needed for leafhoppers. (6 pts.)

Strawberries:

Meadow spittlebug, strawberry leaf roller, strawberry weevil. Use 2 to 4 pts. per acre. A dilute spray of 100-200 gals. water per acre is suggested.

FIG. 28-CHARACTERS
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ADULT MOSQUITO CONTROL

For dilute-spray ground applications to trees (including shade trees, shelter belts, forests, plantations, parks and recreational areas), ornamentals, woody plants and shrubs, apply the specified dosage per 100 gallons of water. For concentrate-spray ground applications, apply the specified dosage per acre in sufficient

spray volume to provide thorough coverage. To prepare small volumes of spray, use 1 tablespoon (1/2 fluid ounce) per gallon of water, where rates of 1 quart are indicated.

SITE	AMOUNT OF SEVIN / 100 GALS.	SPECIFIC DIRECTIONS
Pastures, Rangelands, Parks, Recreational Areas, Logging Camps, Military Posts and Adjacent Forested lands or Wastelands	1 to 2 (1/2 to 1 tablespoon per gallon)	<p>DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.</p> <p>CAUTION: May kill shrimp and crabs. Do not use in areas where these 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. Use 1/4 to 1/2 quart per 100 gallons in mistblowers, and 1 quart per acre in low pressure ground sprayers.</p>
	25	For residual control in subtropical regions apply 4 gallons of prepared spray per 2000 square feet of surface area. Repeat in 3 to 6 months or when necessary.

Application: Apply in sufficient spray gallonage to effectively cover area to be treated. For all methods apply in sufficient water to effectively cover area to be treated. By airplane use in 3 to 5 gals. water per acre.

For optimum control apply in early morning or evening when air is calm and adult mosquitoes are active. Use 1 qt. per 100 gals. in hydraulic sprayers, or 2 teaspoons per gallon in hand sprayers for treating backyards or other limited areas. Thoroughly cover lower shade tree foliage, shrubbery, flower beds, grass and shaded areas around buildings where adult mosquitoes congregate. Do not apply to water. Repeat at 7 to 10 day intervals or as necessary. Sevin injures Boston Ivy. Do not use on this ornamental.

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For control of certain turfgrass pests, apply the recommended rates 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

PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.

SITE	INSECT	AMOUNT OF SEVIN [®]		SPECIFIC DIRECTIONS	
		FL. OZ./ 1000 SQ. FT.	QUARTS ACRE		
Turf grasses	Ants Armyworm Cenipepes Chiggers Cutworms Earwigs Essex skipper European chafar Fall armyworm Fiery s. weaver Grasshoppers Green June beetle grub	June beetles Leathoppers Lucerne moth Millipedes Mosquitoes (adults) Sowbugs Sowlebugs Springtails Ticks Yellow-striped armyworm	1½ to 3	2 to 4	For Armyworm, Cutworm and Fall Armyworm Control: Do not irrigate treated areas following insecticide application. For Green June Beetle Grub Control: Make applications when grubs are feeding near the soil surface. Water or irrigate turf grasses soon after treatment.
	Chinch bugs Sod Webworm (lawn moths)		4.4 to 6	6 to 8	For Chinch Bug Control: Treat entire grass area rather than just damaged areas. Irrigation of turf grass area before treatment will aid in penetration of insecticide into turf grass. For Sod Webworm Control: Do not irrigate treated areas following insecticide application.
	Bluegrass billbug European crane fly Fleas White grubs (such as Japanese beetle, Chafar beetle and <i>Phytomyza</i> spp. larvae)		6	8	For European Crane Fly Control: Treatments should be applied in early spring, April 1 to April 15, or as recommended by local Agricultural Extension Service agents. Water or irrigate turf grasses thoroughly soon after treatment. For White Grub Control: Applications should be made when grubs are feeding near the soil surface, usually during late March through May, or July to early September, or as recommended by local Agricultural Extension Service agents. Water or irrigate turf grasses thoroughly soon after treatment.

IMPORTED FIRE ANT CONTROL

SITE	AMOUNT OF SEVIN [®] / VOLUME OF WATER	SPECIFIC DIRECTIONS
Lawns, Cemeteries and Recreational Areas (including turf, golf courses, and parks) Pastures Rangeland Forested Lands and Wasteland	1½ quarts/ 100 gallons or 1½ tablespoons/ gallon	Apply a total of 2 gallons of the diluted solution over the surface of each mound or at least 1 quart per 6 inches of mound diameter using a bucket, can or other appropriate equipment. Thoroughly wet mound and surrounding area to a 4 ft. diameter (12 sq. ft.). Do not disturb mounds prior to treatment. Pour solution from a height of about three feet to give sufficient force to break mound apex and follow into ant tunnels. For best results apply in cool weather, 65-80 degrees F, or in early morning or late evening hours. Repeat application if mound activity resumes after 10 days. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness. DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.

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Application: Use garden hose sprayers or pressure type equipment and apply full water volume to insure good penetration of turf. For best results, mow lawn and apply immediately after rain or watering. Repeat in 2 to 3 weeks if necessary.

TREES AND ORNAMENTALS

For control of certain insects on trees, ornamentals, woody plants and shrubs, apply the recommended amount in 100 gallons of water. Use hand or power-operated sprayer to wet leaves and twigs to the dripping point.

Do not use on Boston ivy, Virginia creeper and maidenhair fern. During early season it may also injure Virginia and sand pines.

INSECT		QUARTER SEVIN® PER 100 GALS.	SPECIFIC DIRECTIONS
Ants Apple aphid Armyworm Azalea leafminer Bagworms Birch leafminer Blister beetle Boxelder bug Boxwood leafminer Browntail moth Caterpillars Catalpa sphinx Chiggers Cutworms Cypress tip moth Eastern spruce gall adelgid Elm leaf aphid Elm leaf beetle Elm sawfly Erichoid mites European pine shoot moth Fall armyworm Fire beetles Fuchsia gall mite Fuller rose beetle Gall mites Gall wasps Greenstriped mapleworm	Grasshoppers Gypsy moth Hackberry nipple gall maker Holly bud moth Holly leafminer Jackpine budworm Japanese beetle Jeffrey pine needleminer June beetles Lace bugs Leafhoppers Leafrollers Locust borer Maple leafcutter Meshybugs Mimosa webworm Nantucket pine tip moth Oak leafminers Oak leaf skeletonizer Oak moth Oakworm complex Osage caterpillar Olive ash borer Orangestriped oakworm Orange tortrix Periodical cicada Pine looper	Pine sawfly Pine spittlebug Pitch pine tip moth Plant bugs Poinsettia hornworm Psyllids Puss caterpillar Redumped oakworm Rose aphid Rose chaler Roselug Saddled prominent Sawflies (exposed) Scale insects Sowbugs Soney elm caterpillar Springtails Spruce needleminer Subtropical pine tip moth Tent caterpillars Thrips (exposed) Ticks Tree hoppers Walnut caterpillar Webworms Western hemlock looper Willow leaf beetles Yellow poplar weevil	Observe plant response precautions. Apply dilute sprays to obtain thorough coverage of upper and lower leaf surfaces. To control scale insects, treat trunks, stems and twigs in addition to plant foliage. For optimum worm control, treat when in early instars. Addition of a sticker may improve residual control. Applications for control of maple leafcutter on sugar maple should be made when larvae are in 2nd instar after mining and as cases are being formed. DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.
Balsam twig aphid Cooley spruce gall adelgid Douglas-fir tussock moth	Spruce budworm Western spruce budworm	1	
Ips engraver beetles Mountain pine beetle Roundheaded pine beetle Spruce beetle Western pine beetle		16	Effective for beetle control or as a protective treatment. Apply 1 gallon of spray per 50 square feet of bark prior to beetle flight or host-tree attack. Treat tree trunks from ground level up, until trunk diameter is less than 5 inches. Repeat treatments as needed.
Elm Bark Beetle			Apply approximately 20-30 gallons of spray mixture for each 50 feet of elm tree for thorough coverage of all bark surfaces on trunks, limbs and twigs.

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POULTRY PEST CONTROL:

Chickens, Ducks, Game Birds, Geese, Pigeons,
Turkeys:

DIRECT SPRAY MIST ON BIRDS: Control chicken
mite, fleas, lice and northern fowl mite by (1)

MISTING WITH ELECTRIC FOG MACHINE: Mix 10 fl.
ozs. in 1 gal. of spray. Use 1 1/2 gal. per 1,000
hens in cages, on litter or on slatted floor.

Repeat in 4 weeks if necessary, or (2) SPRAY
WITH KNAPSACK OR CYLINDER TYPE COMPRESSED AIR
SPRAYERS: Mix 6 fl. ozs. in 5 gal. of spray.

Use 1 gal. per 100 hens in cages on litter or on
slatted floor. Repeat in 4 weeks if necessary.

OKBY

Direct mist spraying for chicken mites and fleas
is a supplement to spraying roosts and buildings
for control of these pests. SPRAY ROOSTS AND

BUILDINGS with conventional power spray or knap-
sack equipment. For bedbugs, chicken mite and
fleas - use 1 qt. per 25 gals. water. For fowl

ticks, use 1 gal. per 25 gals. water. Spray 1
to 2 gal. per 1,000 sq. ft. of wall, bedding,
litter or roost surfaces. Force spray into

cracks and crevices, repeat as needed.

PCA 100-CHARACTERS
SLIT - 40 CHARACTERS

STORAGE & DISPOSAL (12 pt.)

PROHIBITION: Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. Open dumping is prohibited. Do not reuse empty container.

STORAGE: Store unused product in original container only. Store in a cool, dry area out of the reach of children and animals. Not for storage in or around the home. Protect from excess heat.

It is imperative that all Sevin Flowable formulations be stored and protected from freezing.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: (2 1/2 gal) Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(All other containers) Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Subsequent planting of food and feed crops in treated soil must be made with crops on this or other carbaryl label(s).

NOTE: This pesticide is to be sold ONLY in this original unbroken package.

DISCLAIMER: Buyer assumes all risks of use, storage or handling not in strict accordance with directions given herewith.

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