

PM-04

Reg # 19713-49

8/20/97

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Best Copy Available
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

R. Franklin Handy.
Drexel Chemical Company
P.O. Box 13327
Memphis, TN 38113-0327

AUG 20 1997

Subject: Drexel Carbaryl 4L
EPA Registration No. 19713-049
Reference RFH 97-217
Amendment dated July 3, 1997

Dear Mr. Handy:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable provided that you make the labeling changes indicated below before you release the product for shipment bearing the amended labeling:

1. On page 6 of 8 under the heading "PEST CONTROL AROUND BUILDINGS" change the word "Insect" to "Pest" as some of the pests listed are not insects (i.e., ticks, millipedes and spiders).
2. On page 8 under the heading "POULTRY ROOSTS AND BUILDINGS ONLY" change the word "Insect" to "Pest" for the same reason as above (i.e., mites and ticks).

A copy of the labeling stamped "Accepted with Comments" is enclosed for your records. Submit two copies of your final printed labeling before you release the product for shipment.

Sincerely,

A handwritten signature in cursive script that reads "George Tompkins".

George Tompkins, Ph.D., Entomologist
Insecticide-Rodenticide Branch
Registration Division (7505C)

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ACCEPTED
with COMMENTS
in EPA Letter Dated

AUG 20 1997

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

19713-49

Drexel

Carbaryl 4L

Insecticide

ACTIVE INGREDIENT:

Carbaryl (1-Naphthyl N-methylcarbamate) . . . 43.4%

INERT INGREDIENTS: 56.6%

TOTAL: 100.0%

Product contains 4 pounds carbaryl as active ingredient.

KEEP OUT OF THE REACH OF CHILDREN

CAUTION

See Statement of Practical Treatment Below

EPA Reg. No. 19713-49

EPA Est. No. 19713-GA-1

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Induce vomiting by placing finger on back of throat. Call a physician. Never give anything by mouth to an unconscious person.

IF ON SKIN: Remove contaminated clothing and wash skin with soap and plenty of water. If irritation develops, get medical attention.

IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. If irritation develops, get medical attention.

NOTE TO PHYSICIAN: Carbaryl is an N-methyl carbamate insecticide, which is a cholinesterase inhibitor. Over-exposure to this substance may cause toxic signs and symptoms due to stimulation of the cholinergic nervous system. These effects of over-exposure 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 over-atropinization. Mild cases may be given 1 to 2 mg intramuscularly every 10 minutes until full atropinization has been achieved and repeated thereafter whenever symptoms re-appear. 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 over-exposure 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.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed. Avoid breathing spray mist. Avoid contact with eyes, skin or clothing.

OVER-EXPOSURE MAY CAUSE: Salivation, watery eyes, pinpoint eye pupils, blurred vision, muscle tremors, difficult breathing, excessive sweating, abdominal cramps, nausea, vomiting, diarrhea, weakness, headache. In severe cases convulsion, unconsciousness and respiratory failure may occur. Signs and symptoms occur rapidly following over-exposure to this product.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers must wear: Long-sleeved shirt and long pants, Waterproof gloves, Shoes plus socks. 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.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into 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, except under the forest canopy and in use on rice. Discharge from rice fields may kill aquatic and estuarine invertebrates. Do not contaminate water by cleaning of equipment or disposal of wastes.

BEE CAUTION: This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. This product is less hazardous to honey bees when direct application 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 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 hives 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 for further information.

GENERAL INFORMATION

CARBARYL 4L is a suspension of microfine carbaryl insecticide in an aqueous medium. It readily disperses in water to form a spray which, when applied by air or ground equipment, resists erosion by rainfall or overhead irrigation. The directions on this label are based on tests and field experience relating to: (a) effectiveness, (b) possible injury to plants and (c) residues in food, feed and milk. **READ LABEL AND CAUTIONS BEFORE USE. STRICTLY OBSERVE LABEL DIRECTIONS AND APPLICABLE FEDERAL AND STATE REGULATIONS.**

PRE-HARVEST AND GRAZING USE INFORMATION AND LIMITATIONS

Tolerances established under the Federal Food, Drug and Cosmetic Act permit the sale of crops bearing probable carbaryl residues when this product is used in accordance with 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 grazing of forage crops. Application may be made without removing livestock from area being treated. Subsequent planting of food and feed crops in treated soil must be made with crops on this or other carbaryl labels.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

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.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Manufactured By:

Drexel Chemical Company

P.O. BOX 13327, MEMPHIS, TN 38113-0327

SINCE 1972

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CARBARYL 4L Page 1 of 8

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 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

NON AGRICULTURAL USE REQUIREMENT

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 (40CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. The area being treated must be vacated by unprotected persons. Keep unprotected persons out of treated areas until sprays have dried.

SPRINKLER CHEMIGATION

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation system(s). Do not apply this product through any other type of irrigation system.

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

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Public water system means a system for the provision of the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

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 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 shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, 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.

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.

Do not apply when wind speed favors drift beyond the area intended for treatment. Maintain sufficient agitation in the pesticide supply tank to keep the pesticide in suspension. Meter the pesticide into the irrigation water continuously for the duration of the water application. Mix pesticide in a sufficient amount of water to maintain a uniform suspension.

Read entire label. Use strictly according to label directions and cautions. Do not use application methods, dosages, concentrations, or frequencies not listed on labeling. Do not apply against target pests or crops not listed on labeling. Do not mix with fertilizers or micronutrients if the resulting spray mixture is incompatible or alkaline.

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. Carbaryl injures

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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 rice and soybeans.

SPRAY PREPARATION

TO ASSURE A UNIFORM PRODUCT, AGITATE, STIR OR RECIRCULATE ALL CARBARYL 4L CONTAINERS PRIOR TO USE.

Remove oil, rust, scale, pesticides 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 CARBARYL 4L and then the remaining volume of water. Include rinse water from container. Dilution of 1 volume of CARBARYL 4L with 1 volume of water will allow maximum resistance to wash off by rainfall or overhead irrigation. Dilutions higher than 1:11 are not recommended where residual insect control from wash off resistance is desired. 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 MIXTURES FOR PROLONGED PERIODS. CARBARYL 4L spray must be diluted as stated above, and droplets must dry on the foliage before they become washoff 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. Washoff resistance cannot be expected if CARBARYL 4L 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 crops, pest or climatic conditions may require spray gallonage higher than 1:11 dilution. For example in hot, dry weather, or when humidity is low, higher spray gallonage per acre may be required to minimize loss from evaporation and insure thorough coverage. The total spray volume required for effective pest control can be determined by previous experience, pest and crop conditions and local recommendations.

COMPATIBILITY

CARBARYL 4L, 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 CARBARYL 4L with another product and the resulting crop 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 CARBARYL 4L 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.

Carbaryl is unstable under highly alkaline conditions and mixtures with strong bases, such as Bordeaux, lime-sulfur and case-in-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. Calibrate spray equipment to deliver the required amount. The flow rate of CARBARYL 4L diluted 1:1 with water is similar to the flow rate of water. Use 50 mesh slotted strainers in spray system and behind nozzles. To clean spray system after use, drain and flush with water.

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, advance instars and adults. Thorough and uniform spray coverage is essential for effective control.

CARBARYL 4L does not control spider mites. If spider mites are a problem, use a registered miticide. Regional differences have been noted in the susceptibility of certain strains of fall armyworm to CARBARYL 4L. If local experience indicates inadequate control, use an alternative pesticide.

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FORAGE, FIELD AND VEGETABLE CROPS

Apply in sufficient spray volume to obtain thorough coverage. Where maximum wash off resistance is needed, use up to 1:1 (vol/vol) dilution with water. Do not dilute greater than 1:11 where wash off resistance is desired. To prepare small volumes of spray, use 1 tablespoonful (1/2 fluid ounce) of CARBARYL 4L per gallon of water where rates of 1 quart per acre or 1 quart per 100 gallons are indicated in the table below. Rates given below is quarts of CARBARYL 4L per acre.

Crops	Insects	Qts. / A	PHI (Days)
All forage, field and vegetable crops on this label.	Grasshoppers	1/2 to 1 1/2	See specific forage, field or vegetable crop
SPECIFIC DIRECTIONS: Use 1/2 to 1 qt. for nymphs on small plants or sparse vegetation in wastelands, rangeland, ditch banks and borders. Use 1 to 1 1/2 qts. for adult grasshoppers or application to dense vegetation.			
Alfalfa, Clovers, Birdsfoot Trefoi (Do not use on Birdsfoot Trefoi in CA)	Blister Beetles, Mexican Bean Beetles	1/2 to 1	Alfalfa 7 Clovers & Birdsfoot Trefoi 0
	Alfalfa Caterpillar, Bean Leaf Beetle, Cucumber Beetles, Green Cloverworm, Japanese Beetle, Leafhoppers, Potato Leafhopper, Three-cornered Alfalfa Hopper, Thrips, Velvetbean Caterpillar	1	
	Alfalfa Weevil Larvae, 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, Yellow-striped Armyworm	1 to 1 1/2	
SPECIFIC DIRECTIONS: Observe Bee Caution. Observe plant response precautions. Carbaryl may cause a temporary bleaching of tender alfalfa foliage. For alfalfa weevil larvae, if pre-treatment damage is extensive, cut alfalfa and treat the stubble. Use higher rate in areas east of the Rocky Mountains. On dense growth use up to 25 to 40 gallons per acre with ground equipment to ensure adequate coverage.			
Asparagus	Asparagus Beetle	1 to 2	1
	Apache Cicada, Asparagus Beetle	2 to 4	Post-harvest application only.
SPECIFIC DIRECTIONS: Treat ferns or brush growth. Do not treat more than once every 3 days.			

Crops	Insects	Qts. / A	PHI (Days)
Beans (including blackeyed peas, cowpeas, crowder or southern peas, dry beans, green beans, lima beans, navy beans, snap beans), Lentils	Blister Beetles, Mexican Bean Beetle	1/2 to 1	0 except for Cowpeas which are 3 days
	Alfalfa Caterpillar, Bean Leaf Beetle, Cucumber Beetles, Flea Beetles, Green Cloverworm, Japanese Beetle, Leafhoppers, Three Cornered Alfalfa Hopper, Thrips, Velvetbean Caterpillar, Western Bean Cutworm	1	
	Armyworm, Corn Earworm, Cutworms, European Corn Borer, Fall Armyworm, Stink Bugs, Tarnished Plant Bug, Webworms	1 to 1 1/2	
	Alfalfa Looper	1 1/2	
	Cowpea Curculio	2	
	Corn Earworm*, Lima Bean Pod Borer*, Lygus Bugs*, Stink Bugs*	2	
*CA Only			
SPECIFIC DIRECTIONS: Observe plant response precautions.			
Cabbage, Broccoli, Brussels Sprouts, Cauliflower, Kohlrabi	Flea Beetles, Harlequin Bug	1/2 to 1	3
	Armyworm, Corn Earworm, Fall Armyworm, Imported Cabbageworm	1 to 2	
Chinese cabbage, Collards, Hanover salad, Horseradish, Kale, Mustard greens, Radishes, Rutabagas, Turnips	Flea Beetles, Harlequin Bug, Leafhopper	1/2 to 1	(Horseradish, radishes, rutabagas & turnip roots) 3 (Kale, chinese cabbage, collards, hanover salad, mustard greens & turnip tops) 14
	Aster Leafhopper	1 to 1 1/2	
	Armyworm, Corn Earworm, Fall Armyworm, Imported Cabbageworm, Stink Bugs, Tarnished Plant Bugs	1 to 2	

Crops	Insects	Qts. / A	PHI (Days)
Carrots, Celery, Parsnips, Parsley	Flea Beetles, Leafhoppers	1/2 to 1	(Carrots) 0 (Celery, Parsley) 14 (Parsnips) 3
	Aster Leafhopper, Lygus Bugs, Spittlebugs	1 to 1 1/2	
	Armyworm, Corn Earworm, Fall Armyworm, Stink Bugs, Tarnished Plant Bug	1 to 2	
SPECIFIC DIRECTIONS: Treat on a 5 to 7 day schedule.			
Corn (field, sweet, pop)	Armyworm, Corn Earworm, Corn Rootworm Adults, Chinch Bugs, European Corn Borer, Fall Armyworm, Flea Beetles, Japanese Beetle, Sap Beetles, Southwestern Corn Borer, Leafhoppers	1 to 2	0
	SPECIFIC DIRECTIONS: 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 20 gallons of water per acre by ground and direct spray toward stalk to provide thorough coverage. Treat when infestation averages 15% and at 90% to 100% tassal emergence. Treatment after 100% silk emergence will reduce effectiveness.		
	Western Bean Cutworm	2	0
	Cutworm	2 to 3	
SPECIFIC DIRECTIONS: Apply in a 12 inch band, 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.			

Crops	Insects	Qts. / A	PHI (Days)
Cotton	Cotton Fleahopper, Cotton Leafworm, Flea Beetles, Striped Blister Beetle, Thrips	1/2 to 1	7
	SPECIFIC DIRECTIONS: Early season insect control		
	Boll Weevil, Bollworms, Cotton Leafperforator, Fall Armyworm, Leafrollers, Leafhoppers, Tarnished Plant Bug, Yellow Striped Armyworm (Cotton Cutworm)	1 to 2	7
	SPECIFIC DIRECTIONS: Treat on a 5 to 7 day schedule for as long as control is necessary. Mid to late season insect control may be applied after bolls open.		
	Lygus Bugs	1 to 2	7
SPECIFIC DIRECTIONS: For light to moderate population in Western irrigated cotton.			
	Pink Bollworm	1 1/2 to 2 1/4	7
SPECIFIC DIRECTIONS: Aphid populations will be suppressed by repeated applications of this insecticide.			
Cucumber, Melons, Pumpkin, Squash	Pickleworm, Melonworm	1/2 to 1	0
	Cucumber Beetles, Flea Beetles, Leafhoppers, Squash Bugs	1	
SPECIFIC DIRECTIONS: Observe plant response precautions. Avoid excessive applications.			

Crops	Insects	Qts. / A	PHI (Days)
Dandelion, Endive (Escarole), Lettuce, Salsify	Flea Beetles, Harefoot Bug, Leafhoppers	1/4 to 1	3 (head lettuce, salsify roots), 14 (dandelion, endive, (escarole), leaf lettuce, salsify tops)
	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	
SPECIFIC DIRECTIONS: Observe plant response precautions. Treat on a 5 to 7 day schedule after heads begin to form.			
Forage grasses, Pasture, Rangeland	Armyworm, Black Grass Bugs, Chinch Bugs, Essex Skipper, Fall Armyworm, Mormon Cricket, Range Caterpillars, Range Crane Fly, Striped Grass Looper, Thrips	1 to 1 1/2	0
	White Grubs (Green June Beetle)	1 1/2 to 2	
SPECIFIC DIRECTIONS: To control thrips in grasses grown for seed use high spray pressure to improve penetration into boot.			
Garden beet, Spinach, Swiss chard	Flea Beetles, Harefoot Bug, Leafhoppers	1/4 to 1	3 (garden beet roots) 14 (garden beet tops, spinach, Swiss chard)
	Aster leafhopper	1 to 1 1/2	
	Armyworm, Corn Earworm, Fall Armyworm, Stink Bug, Tarnished Plant Bug	1 to 2	
SPECIFIC DIRECTIONS: Treat on a 5 to 7 day schedule.			
Onions	Corn Earworm, Stink Bugs	1 to 2	0
SPECIFIC DIRECTIONS: Treat on a 5 to 7 day schedule.			

Crops	Insects	Qts. / A	PHI (Days)
Rice (Cont.)	Armyworm, Leafhoppers, Tadpole Shrimp	2	14
SPECIFIC DIRECTIONS: CA Only. For optimum tadpole shrimp control apply to water when pest first appears. Do not use on rice fields in which crayfish and/or catfish farming is included in the cultural practice.			
Sorghum (milo, grain, sweet and hybrid)	Sorghum Midge	1/4 to 1	(Grain) 21 (Forage) 0
	Armyworm, Chinch Bugs, Corn Earworm, Fall Armyworm, Stink Bugs, Webworms	1 to 2	
	Southwestern Corn Borer	1 1/2	
	Cutworms	2	
SPECIFIC DIRECTIONS: Direct spray into forming heads for optimum insect control. Treat for Sorghum Midge when 25% to 30% of heads have emerged from boot and are in bloom. Repeat application 3 to 5 days later if adults are still active. A third application may be necessary in late planned sorghum or if midge are abundant. For Chinch Bugs, use high gallonage ground application directed at the base of plants. This product will not effectively control the Southern Green Stink Bug.			
Soybeans	Bean Leaf Beetle, Cucumber Beetles, Green Cloverworm, Mexican Bean Beetle, Velvetbean Caterpillar	1/4 to 1	0
	Blister Beetles, Grape Colaspis, Mexican Bean Beetle	1/4 to 1	
	Alfalfa Caterpillar, Japanese Beetle, Leafhoppers, Three-cornered Alfalfa Hopper, Thrips	1	
	Corn Earworm	1/4 to 1 1/2	
	Armyworm, Cutworms, Fall Armyworms, Stink Bugs, Webworms	1 to 1 1/2	
	Painted Lady (Thistle Caterpillar), Saltmarsh Caterpillar, Woolly Bear Caterpillar, Yellow Striped Armyworm	1 1/2 to 2	
SPECIFIC DIRECTIONS: Do not apply a combination of CARBARYL 4L and 2,4-DB Herbicides to soybeans. For light to moderate populations use lower rate. For heavy infestations use higher rate.			

Crops	Insects	Qts. / A	PHI (Days)
Beans	Blister Beetles, Mexican Bean Beetle	1/4 to 1	0
	Alfalfa Caterpillar, Bean Leaf Beetle, Cucumber Beetles, Green Cloverworm, Japanese Beetle, Leafhoppers, Red-necked Beanworm, Three-cornered Alfalfa Hopper, Thrips, Velvetbean Caterpillar	1	
	Armyworm, Corn Earworm, Fall Armyworm, Stink Bugs, Webworms	1 to 1 1/2	
	White-eyed Beetle Adult, Cutworms	2	
SPECIFIC DIRECTIONS: Observe plant response precautions.			
Peas	Colorado Potato Beetle, Leafhoppers	1	3
	Armyworms	1 to 1 1/2	
	Alfalfa Caterpillar, Cutworms, Pea Leaf Weevil, Pea Weevil, Yellow Striped Armyworm	1 1/2	
	Alfalfa Lopper	2 1/2	0
SPECIFIC DIRECTIONS: WA state only.			
Tomato, Eggplant, Pepper	Colorado Potato Beetle, Flea Beetles, Leafhoppers	1/4 to 1	
	European Corn Borer, Fall Armyworm, Lace Bugs, Stink Bugs, Tarnished Plant Bug, Tomato Fruitworm, Tomato Hornworm, Tomato Pinworm	1 to 2	0
	Cutworms	2	
SPECIFIC DIRECTIONS: Thorough coverage is essential to effectively suppress stink bugs. When disease transmission is suspected, monitor fields following application and retreat if reinfestation occurs.			
Prickly Pear Cactus	Cochineal Scale (Screwworm)	2	1
SPECIFIC DIRECTIONS: Apply as needed at 7 to 10 day intervals. Do not make more than 7 applications per season.			
SPECIFIC DIRECTIONS: For Aerial Application Only. Apply a maximum of 2 applications per year. Allow at least 17 days between applications. Carefully mark swaths to avoid over-application.			
Rice	Armyworm, Chinch Bugs, Fall Armyworm, Stink Bugs	1 to 1 1/2	14
SPECIFIC DIRECTIONS: Do not apply Propanil herbicide within 15 days before or after CARBARYL 4L application or plant injury will result. Do not use on rice fields in which crayfish and/or catfish farming is included in the cultural practice. MS Delta and TX. CAUTION: May kill shrimp and crabs. Do not use in areas where these are important resources.			

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Crops	Insects	Qts. / A	PHI (Days)
Sugar beets	Armyworm, Beet Leaf Beetle, Fall Armyworm, Flea Beetles, Leafhoppers, Webworms	1 to 1½	14
	Outworms	1½	
Sunflowers	Outworms	1½	60
	Armyworm, Fall Armyworm	1½ to 2	
	Stem Weevil, Sunflower Beetle	1 to 2	
Sweet potato	Corn Earworm, Curcumber Beetle, Flea Beetles, Sweet Potato Hornworm, Tortoise Beetles	1 to 2	0
	Yellow-striped Armyworm	2	
	Sweet Potato Weevil	1 to 2	
	SPECIFIC DIRECTIONS: Apply as a foliar spray as needed. FOLIAR APPLICATION: Full coverage of plants is essential. Use lower rate on young plants and higher rate on mature plants.		
Tobacco	Tobacco Flea Beetle	2 lbs./gal. or 1 qt./50 gals. or 5 gals./100 sq. yards	0
	SPECIFIC DIRECTIONS: IN PLANT BEDS - To prevent injury, avoid excessive applications.		
	Green June Gaele Grubs	½ qt./100 gals.	0
	SPECIFIC DIRECTIONS: Apply only to areas that larvae have uprooted by sprinkling mixture as a drench treatment with 50 to 100 gallons per 100 square yards.		
Field Treatment	Budworms, Fall Armyworms, Flea Beetles, Hornworms, Japanese Beetle, June Beetle, Suckfly	1 to 2	0
SPECIFIC DIRECTIONS: IN FIELDS - Use lower rate on young plants (up to knee height). Use at least 10 gallons of prepared spray per acre. Begin treatments when worms are small. If late season applications are necessary, allow three days before pruning or cutting.			
Wetland, Rights-of-Way, Hedgerows, Ditchbanks, Roadsides	Black Grass Bug, Mormon Cricket, Range Caterpillars, Range Crane Fly	¼ to 1	(aerial application) 0 (ground application) 14
SPECIFIC DIRECTIONS: 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 on ground. Aerially treated areas may be grazed or cut for hay on day of treatment. Carefully mark swaths to avoid over-application.			
Wheat	Flea Beetles	¼ to 1	(forage) 0
	Cereal Leaf Beetle	1	(gran) 21
	SPECIFIC DIRECTIONS: Application is effective against eggs, larvae and adults		
	Armyworm, Fall Armyworm	1 to 1½	

TREES AND ORNAMENTALS

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 (¼ fluid ounce) of CARBARYL 4L per gallon of water, where rates of 1 quart are indicated. For aerial applications to forest trees (including shade trees, shelter belts, plantations, parks and recreational areas) and commercially grown ornamentals, woody plants and shrubs, apply the specified dosage per acre in sufficient spray volume to provide thorough coverage. Avoid direct application to lakes, streams and ponds.

Crops	Insects	CARBARYL 4L (Qts.)	
AERIAL/ GROUND APPLICATION: Trees (including shade trees, shelter belts, forest, plantations, parks and recreational areas) Ornamentals (including roses, flowers and other herbaceous plants), Woody plants and shrubs.	Ants, Apple Aphid, Armyworm, Azalea Leafminer, Bagworms, Birch Leafminer, Bister Beetle, Boxelder Bug, Boxwood Leafminer, Brown Tail Moth, Cankerworms, Catalpa Sphinx Chiggers, Cudley Spruce Gall Aphid, Outworms, Cypress Tip Moth, Douglas Fir, Tussock Moth, Eastern Spruce Gall Aphid, Elm Leaf Aphid, Elm Leaf Beetle, Elm Sawworm, Eriophyid Mites, European Pine Shoot Moth, Fall Armyworm, Flea Beetles, Fuller Rose Beetle, Gall Midges, Gall Wasps, Green Striped, 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	Mealy Bugs, Mimoso Webworm, Nantucket Pine Moth, Oak Leafminers, Oak Leaf Skeletonizer, Oakworm Complex, Oleander Caterpillar, Oliver Ash Borer, Orange Striped Oakworm, Orange Tortix, Periodical Cicada, Pine Sawfly, Pine Spittle Bug, Pitch Pine Tip Moth, Plant Bugs, Pansettia Hornworm, Psyllids, Fuss Caterpillar, Redhumped Oakworm, Rose Aphid, Rose Chafer, Roseslug, Sanded Prominent, Sawflies (exposed), Scale Insects, Sowbugs, Sory Elm Caterpillar, Springtails, Spruce Budworm, Spruce Needleminer, Subtropical Pine Tip Moth, Tent Caterpillar, Thorn Bugs, Thrips (exposed), Ticks, Walnut Caterpillar, Webworms, Western Hemlock Looper, Western Spruce Budworm, Willow Leaf Beetles, Yellow Poplar Weevil	1
	SPECIFIC DIRECTIONS: Observe plant response pre-cautions. 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.		

Crops	Insects	CARBARYL 4L (Qts.)
GROUND/AERIAL APPLICATION: Forest trees (including shade trees, shelter belts, forests, plantations, parks and recreational areas) and Commercially Grown Ornamentals (Including roses, flowers and other herbaceous plants), Woody Plants and Shrubs	Los Engraver Beetles Mountain Pine Beetle Rounded Pine Beetle Western Pine Beetle	20
	SPECIFIC DIRECTIONS: Effective as a preventative treatment only. Repeat annually as required to prevent beetle attack. Apply 1 gallon of spray per 50 square feet of bark in late May to early July, or prior to beetle attack. Treat tree trunks from ground level up until trunk diameter is less than 5 inches.	
	Elm Bark Beetle	20
SPECIFIC DIRECTIONS: Apply approximately 20 to 30 gallons of spray mixture for each 50 feet of elm tree for thorough coverage of all bark surfaces on trunks, limbs and twigs.		

Crops	Insects	
Lawns and Recreational Areas (including turf, golf courses, & parks)	Ants, Armyworm, Bluegrass Billbug, Centipedes, Chiggers, Cutworms, Earwigs, Essex skipper, European Chafer, Fall Armyworm, Fiery Skipper, Fleas, Grasshoppers, June Beetles, Leafhoppers, Lucerne Moth, Millipedes, Mosquitoes, Sod Webworm (Lawn Moths), Sowbugs, Springtails, Ticks, Yellow Striped Armyworm.	
	SPECIFIC DIRECTIONS: Use 1 quart of CABARYL 4L in 150 to 200 gallons of spray mixture per 5,000 square feet of established lawn, recreational area, roadway or path border. For best results, mow lawn and apply after wetting or rain to ensure good penetration of turf. Garden hose or pressure applications may be used. Repeat 2 or 3 weeks later if necessary.	
	Chinch Bugs, White Grubs	
SPECIFIC DIRECTIONS: Use 1½ quarts of CARBARYL 4L in 150 to 200 gallons of spray per 5,000 square feet.		

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 application, apply the specified dosage per acre in sufficient spray volume to provide thorough coverage. To prepare small volumes of spray, use 1 tablespoon (1/2 fluid ounce) of CARBARYL 4L per gallon of water, where rates of 1 quart are indicated. For aerial applications to forest trees (including shade trees, shelter belts, plantations, parks and recreational areas) and commercially grown ornamentals, woody plants and shrubs, apply the specified dosage per acre in sufficient spray volume to provide thorough coverage. Avoid direct application to lakes, streams and ponds.

Crops	Qts. CARBARYL 4L / 100 Gals.
Pastures, Rangelands, Yards, Parks, Recreational areas, Logging camps, Military posts and Adjacent forested Lands or wastelands	1/4 to 1 (1/2 to 1 tbls. / gals.) SPECIFIC DIRECTIONS: CAUTION: May kill shrimp and crabs. Do not use in areas where these are important resources. BEE CAUTION. Treat shrubbery and areas where adult mosquitoes congregate. Treat when adult mosquitoes are active in early mornings or late evening. Repeat at 7 to 10 day intervals. Use 1/4 to 1/2 quart per 100 gallons in mistblowers. 1/2 to 1 quart per acre in aerial sprays and 1 quart per acre in low pressure ground sprays. 25 SPECIFIC DIRECTIONS: For residual control in subtropical regions apply 4 gallons of prepared spray per 2000 square feet of surface areas. Repeat in 3 to 6 months or when necessary.

PEST CONTROL AROUND BUILDINGS

Insect	Qts. CARBARYL 4L
Ants, Cockroaches	20 (20 tbls. / gals.)
Brown dog tick, Earwigs, Fleas, Millipedes, Silverfish, Spiders	10 (10 tbls. / gals.)

SPECIFIC DIRECTIONS: Do not treat animals. Apply as a coarse wet spray or with a paint brush to outdoor sleeping quarters of pets. Outside perimeter of dwellings and other areas where insects tend to congregate. Do not use where edible products are exposed, being prepared, processed or served. Avoid application to surfaces where visible spray residues are objectionable.

IMPORTED FIRE ANT CONTROL

Site	Amount of Carbaryl 4L / Volume of Water
Lawns, cemeteries and recreational areas (including turf, golf courses and parks), pastures, rangeland, forested lands and wasteland	1 1/2 qt. / 100 gallons or 1 1/2 tablespoons / gallon
SPECIFIC DIRECTIONS: Apply a total of 2 gallons of the diluted solution over the surface of each mound or at least 1 quart per 6 inches of mound diameter using a bucket, can or other appropriate equipment. Thoroughly wet mound and surrounding area to a 4 ft. diameter (12 sq. ft.). Do not disturb mounds prior to treatment. Pour solution from a height of about three feet to give sufficient force to break mound apex and flow into ant tunnels. For best results apply in cool weather, 65 to 68 degrees F, or in early morning or late evening hours. Repeat application if mound activity resumes after ten 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 qt. / 100 gallons

SPECIFIC DIRECTIONS: Do not use on any food crop not listed on label. Do not make more than one application, either as a root-dip or a drench treatment (applied to the point of saturation). Avoid contact with foliage and treat only the growing media when using on bedding plants.

TREE FRUIT AND NUT CROPS

For dilute sprays apply the specified dosage of 100 gallons of water. For concentrated and aerial sprays increase the concentration of CARBARYL 4L in the spray mixture to apply an amount per acre equivalent to that in a dilute spray. The optimum spray gallonage will depend on tree size, density, and stage of growth. Typical spray gallonage per acre range from 200 to 300 gallons for dilute sprays, 30 to 100 gallons for concentrate sprays, and 10 to 25 gallons for aerial sprays. Do not exceed maximum label rate per acre per application.

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Crops	Insects	Qts. / 100 Gals.	PHI (Days)
Apple Thinning		1/4 to 1/2	1
	Observe Bee Caution. Apply 1 full coverage dilute spray between 10 and 25 days after full bloom. If factors such as tree age, variety, nutrition, previous crop pruning, bloom and degree of set favor excessive fruit thinning with CARBARYL 4L, exercise caution to avoid possible yield reduction. Rates vary depending on variety and local orchard conditions. Consult with your County Extensions Service or other experts for advice on the proper use of this product. In Eastern apple growing areas, tank mix combinations of Carbaryl and Naphthaleneacetic acid (NAA or Naphthaleneacetamide (NAD)) have been successfully thinned several early-maturing, heavy-setting varieties, as well as hard-to-thin varieties such as Golden Delicious and Rhode Island Greening. The higher rate of Carbaryl and reduced rates of NAA or NAD followed 7 to 10 days later by an application of Carbaryl has improved thinning on these varieties. For easily thinned varieties including Cortland, Grimes, Jonathan, McIntosh, Orleans, Rome Beauty, Puritan, Red Delicious, Winesap, & Yellow Newton.		
		1/2 to 1	1
	SPECIFIC DIRECTIONS: 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, & York Imperial.		
Almond	Peach twig borer, San Jose scale, Fruitree leafroller	1	28
	SPECIFIC DIRECTIONS: Observe Bee Caution. Apply in "popcorn" or petal fall stages and again when the May brood of the peach twig borer begins to hatch or thereafter as needed. For dormant or delayed dormant timing, apply in combination with a recommended dormant oil. Refer to the dormant oil label for additional use directions and restrictions.		
	Navel orangeworm	1	28
	SPECIFIC DIRECTIONS: Time early and mid-season application to correspond to moth flight peaks. Make a late season application at initiation of hull split or up to 10% hull split. Do not apply more than 5 quarts per acre.		

Crops	Insects	Qts. / 100 Gals.	PHI (Days)
Apples, Pear	Apple Aphid, Apple Maggot, Apple Rust Mite, Applesucker, Bagworms, California Pearslug (Pear Sawfly), Codling Moth, Eastern Tent Caterpillar, European Apple Sawfly, Eyespotted Bud Moth, Forbes Scale, Fruitree Leafroller, Green Fruitworm, Gypsy Moth, Japanese Beetle, Lecanium Scales, Lesser Appleworm, Lygus Bugs, Orange Tortix, Oystershell Scale, Pear Leaf Blister Mite, Pear Psylla, Pear Rust Mite, Periodical Cicada, Plum Curculio, Red-banded Leafroller, Rosy Apple Aclid, San Jose Scale, Tarnished Plant Bug, Tentiform Leafminers, Woolly Apple Aphid, Yellowheaded Fireworm	1/4 to 1	1
	Apple Mealybug, White Apple Leafhopper	1/2	
SPECIFIC DIRECTIONS: Observe Bee Caution. To avoid undesired apple thinning, delay use at least 30 days after full bloom. For psylla control apply when eggs hatch or young nymphs are present. For cotton scale control, apply when crawlers are present.			

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Crops	Insects	Qts. / 100 Gals.	PHI (Days)
Chestnuts	Chestnut Weevil	2 to 3	0
SPECIFIC DIRECTIONS: Observe Bee Caution. Make 4 applications at weekly intervals beginning in late July for adult chestnut weevil control. Last application should be made prior to shuck split.			
Citrus Fruit (such as grapefruit, lemons, limes, oranges, tangelos, tangarine, citrus citron, kumquats, & hybrids)	Avocado Leafroller, California Orange Dog, Citrus Outworm, Citrus Root Weevil, Fruittree Leafroller, Orange Tortrix, Western Tussock Moth, West Indian Sugarcane Borer (adult)	1	5
	Black Scale, Brown Soft Scale, California Red Scale, Citricola Scale, Citrus Snow Scale, Yellow Scale.	½ to 1	
SPECIFIC DIRECTIONS: Observe Bee Caution. To ensure thorough coverage, do not apply less than 10 gallons of dilute spray mixture per mature tree. May be mixed with petroleum oils commonly used on citrus.			
Filbert	Filbert Aorn, Filbert Leafroller, Filbert Worm	1	0
SPECIFIC DIRECTIONS: Apply when leafroller eggs are hatching. Repeat on first appearance of adult filbert moths and again 3 to 4 weeks later. Apply dilute sprays in 300 to 400 gallons per acre.			
Olives	Olive scale	¾ to 1	0
SPECIFIC DIRECTIONS: For optimum scale control add 1½ gallons of summer oil and apply mixture when crawlers are present. Do not exceed 2 applications per year.			
Peaches, Apricots, Nectarines	Apple Parnomis, Codling Moth, Cucumber Beetles, European Earwig, Fruittree Leafroller, Gypsy Moth, Japanese Beetle, June Beetles, Lecanium Scales, Lesser Peachtree Borer, Olive Scale, Orange Tortrix, Oriental Fruit Moth, Peach Twig Borer, Periodical Cicada, Plum Curculio, Reebanoad Leafroller, San Jose Scale, Tamished Plant Bug, Tussock Moths, Variegated Leafroller	1	1 (peaches) 3 (apricots & nectarines)
	SPECIFIC DIRECTIONS: 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.		

Crops	Insects	Qts. / 100 Gals.	PHI (Days)
Peaches, Apricots, Nectarines (Cont.)	Plum Curculio, Red-banded Leafroller, San Jose scale, Tamished Plant Bug, Tussock Moth, Variegated Leafroller	1	3 (apricots & nectarines)
SPECIFIC DIRECTIONS: For optimum scale control apply when crawlers are present. Spray limbs and trunks thoroughly, weekly during moth flight.			
Pecans	Black Margined Aphid, Fall Webworm, Hickory Shuckworm, Lesser Webworm, Pecan Stem Phylloxera, Pecan Leaf Phylloxera, Pecan Nut Case-Bearer, Pecan Spittle Bug, Pecan Weevil, Twig Girdler, Walnut Caterpillar.	1 to 2½	0
SPECIFIC DIRECTIONS: Do not apply more than 7.2 quarts of CARBARYL 4L per acre per application.			
Pistachios	Navel orangeworm	½ to 2	14
SPECIFIC DIRECTIONS: Apply dilute volumes of 150 to 300 gallons of mixed spray per acre for full coverage at onset of hull split			
Plums, Prunes, Cherries, Plums, Prunes, Cherries	Black Cherry Aphid, Brown Soft Scale, Cherry Fruitworm, Cherry Maggot, European Earwig, Eyespotted Bud Moth, Forbes Scale, Fruittree Leafroller, Green Fruitworm, Gypsy Moth, Japanese Beetle, Lecanium Scales, Lesser Peachtree Borer, Mealy Plum Aphid, Oystershell Scale, Peach Twig Borer, Plum Curculio, Prune Leafhopper, Red-banded Leafroller, Rose Chafer, San Jose Scale, Variegated Leafroller	1	1
	Codling Moth, Eastern Tent Caterpillar, Orange Tortrix, Tussock Moth	¾	1
SPECIFIC DIRECTIONS: Do not apply more than 6 quarts of CARBARYL 4L per acre per application. For optimum scale control apply when crawlers are present. For lesser peachtree borer control, spray limbs and tree trunks thoroughly weekly during moth flight			
Walnut	Calico Scale, European Fruit Lecanium, Filbert Worm, Fruittree Leafroller, Frosted Scale	¾	0
	Codling Moth	¾	
SPECIFIC DIRECTIONS: For Codling Moth, apply first spray when average cross-sectional diameters of developing nuts are ½ to ¾ inch. Repeat during middle or late June as needed.			
Navel Orange Worm		1	0
SPECIFIC DIRECTIONS: For Navel Orangeworm, time application to coincide with peak egg laying activity at time of or following hull split.			
European Earwig		2	0
SPECIFIC DIRECTIONS: Spray tree trunks to point of runoff.			

SMALL FRUIT CROPS

Recommended dosages refer to quarts of CARBARYL 4L per acre. The optimum spray gallonage will depend on plant size, density and stage of growth. Typical spray gallonage per acre range from 100 to 300 gallons for dilute sprays to 30 to 100 gallons for concentrate sprays to 10 to 25 gallons for aerial sprays. Do not exceed maximum label rate per acre per application.

Crops	Insects	Qts. / A	PHI (Days)
Blackberries, Raspberries, Dewberries (including Boysenberries, Loganberries)	European Raspberry Aphid, Japanese Beetle, Leafhoppers, Leafrollers, Rose Chaffer, Snowy Tree Cricket	1 to 2	7
	Omnivorous Leafroller, Raspberry Sawfly *CA only	2	
Blueberries	Blueberry Maggot, Cherry Fruitworm, Cranberry Fruitworm, European Fruit Lecanium, Japanese Beetle	3	0
SPECIFIC DIRECTIONS: Apply 3 weeks before harvest and repeat as necessary.			
Cranberries	Cutworms, Cranberry Fleworts, Cranberry Fruitworms, Cranberry Twig Girdler, Elm Span Worm, Japanese Beetle, Leafhopper, Rose Chaffer, Soaganothus Worm	1½ to 3	1
SPECIFIC DIRECTIONS: Apply in late bloom and as needed at 7 to 10 day intervals.			
Grapes	European Fruit Lecanium, Grape Leafhopper, Grape Leafroller, Western Grapeleaf Skeletonizer, Western Yellow-striped Armyworm	1 to 2	0
	Cutworms, Eight-spotted Forester, Grape Berry Moth, Japanese Beetle, June Beetle, Orange Tortix, Omnivorous Leafroller, Red-caneed Leafroller, Saltmarsh Caterpillar	2	
SPECIFIC DIRECTIONS: Apply before first brood Leafroller larvae emerge from rolls.			
Strawberries	Flea Beetles, Meadow Spittlebug, Omnivorous Leafroller (Strawberry Fruitworm), Strawberry Bud Weevil, Strawberry Cripser, Strawberry Leafroller, Strawberry Weevil	1 to 2	1
SPECIFIC DIRECTIONS: CARBARYL 4L may injure Early Dawn and Sunrise varieties on the Delmarva Peninsula.			

POULTRY ROOSTS AND BUILDINGS ONLY

Insect	Qts. CARBARYL 4L / 100 Gals.
Bed Bugs, Chicken Mite, Fleas, Lice, Northern Fowl Mite	4
SPECIFIC DIRECTIONS: DO NOT TREAT POULTRY OR GAME BIRDS. Apply 1 to 2 gallons of spray mixture per 1000 square feet of wall, litter or roost surface. Force spray into cracks. Repeat as needed. Avoid contamination of nests, eggs and feeding and watering troughs. Ventilate while spraying. Do not treat premises within 7 days of slaughter.	
Fowl Tick	16
SPECIFIC DIRECTIONS: Apply 2 gallons of spray mixture per 1000 square feet of floor space or litter surface. Repeat as needed. Ventilate while spraying. Do not treat premises within 7 days of slaughter.	
Lesser Mealworms	50
SPECIFIC DIRECTIONS: Apply 2 gallons of spray mixture per 1000 square feet of floor space or litter surface. Repeat as needed. Ventilate while spraying. Do not treat premises within 7 days of slaughter.	

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

STORAGE INSTRUCTIONS

Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool dry area away from any heat or ignition source. Avoid storage at high temperatures. Do not stack over 2 pallets high. Move containers by handles or cases. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Avoid contamination with acids and alkalis. Store in original containers only. If the contents are leaking or material is spilled, follow these steps:

1. Contain spill, absorb with a material such as sawdust, clay granules, or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with water and soap to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Place a leaking container in a plastic tub and transfer the contents as soon as possible to an empty original container.
6. Do not allow run off to enter sewer or contaminate water supplies.
7. Dispose of wastes as indicated below:

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

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.

WARRANTY CONDITION OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. In no case shall Drexel or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by Drexel Chemical Company and is accepted as such by the Buyer.