

R[®]

CARBARYL 90DF

Sevin[®] brand water dispersible granule for broad spectrum insect control

ACTIVE INGREDIENT

Carbaryl(1-naphthyl N-methylcarbamate)..... 90.0%

INERT INGREDIENTS..... 10.0%

Total 100.0%

STOP - READ LABEL BEFORE USING.

KEEP OUT OF REACH OF CHILDREN

WARNING

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Immediately flush with plenty of water for at least 15 minutes.
Call a physician.

IF SWALLOWED: Call a physician or Poison Control Center immediately. Drink 1
or 2 glasses of water and induce vomiting by touching back of the throat with a
finger. 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 INHALED: Remove person to fresh air and apply respiration if indicated.

See left side panel for additional PRECAUTIONARY STATEMENTS.

EPA Reg. No. 9779-294

EPA Est. No. 9779-AR-13

Manufactured For

RIVERSIDE/TERRA CORPORATION

Terra Centre, 600 Fourth Street, Sioux City, Iowa 51101

Riverside Serves Agriculture. Agriculture Serves Everyone.

NET CONTENTS

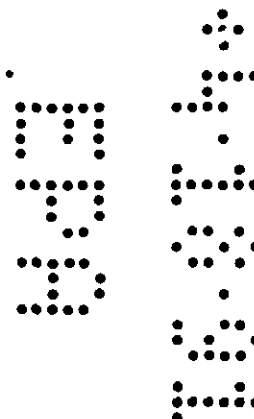
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*Sevin is a registered trademark of Rhone Poulenc Ag Company.

ACCEPTED

AUG 16 1991

Under the Federal Insecticide
Fungicide, and Rodenticide Act,
as amended for the pesticide
registered under
EPA Reg. No. 9779-294



PRECAUTIONARY STATEMENTS
WARNING
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

May be fatal if swallowed. Causes eye irritation. Do not get in eyes, on skin, or on clothing. Avoid breathing spray mist or dust particles. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not use this product in commercial food areas of food handling establishments, restaurants, or other places where food is prepared or processed. Remove contaminated clothing and wash before reuse.

NOTE TO PHYSICIAN: Carbaryl is a moderate, reversible cholinesterase inhibitor. Atropine is antidotal. Do not use 2-PAM, opiates or cholinesterase inhibiting drugs.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and extremely toxic to aquatic and estuarine invertebrates. Do not apply directly to water or wetlands, except under forest canopy and for use on rice. Discharge from rice fields may kill aquatic and estuarine invertebrates. Do not apply when weather conditions favor drift from areas treated. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposal of wastes.

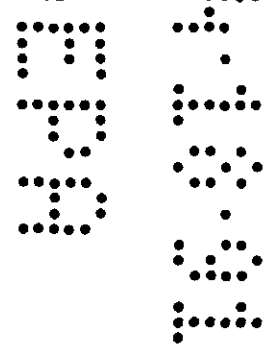
This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

DIRECTIONS FOR USE

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

REENTRY STATEMENT

Do not enter treated areas without protective clothing such as long-sleeved and long-legged work clothing until sprays have dried. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.



NOTICE TO CROP OWNERS

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. In case of accidental exposure follow the information given under STATEMENT OF PRACTICAL TREATMENT and have exposed person(s) see a physician. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is a reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: WARNING. Area treated with carbaryl on (date). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure, refer to the STATEMENT OF PRACTICAL TREATMENT on the label.

STORAGE AND DISPOSAL

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL.
STORAGE

Store in a dry location away from foods, feeds, seeds, and other agricultural chemicals. Keep storage area locked when not in use. Keep container closed when not using. Do not allow water into container as this may cause deterioration of product. Handle in accordance with information given under PRECAUTIONARY STATEMENTS. In the event of spillage, scrape up and dispose of in accordance with information given under PESTICIDE DISPOSAL. Repackage and relabel useable product in a sound container. In case of fire or other emergency, report at once by toll-free telephone to 800-424-9300.

DISPOSAL

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: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

Carbaryl 90DF is a water dispersible granule for broad spectrum control of insects. It readily disperses in water to form a spray which may be applied by air, ground, center pivot, or solid set irrigation equipment.

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. Applications may be made without removing livestock from area being treated. To avoid illegal residues in crops, meat and milk, do not apply at greater rates and more frequent intervals than stated on the label.

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 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.

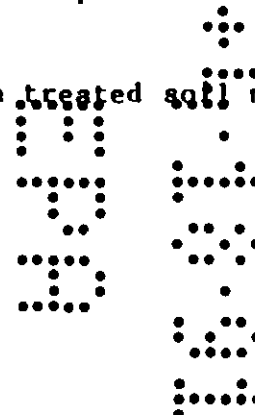
SPRAY PREPARATION: Remove oil, rust, scale, pesticide residues and other foreign matter from mix tanks and entire spray system. Flush with clean water. Fill tank with 1/2 to 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of Carbaryl 90DF and then the remaining volume of water. 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.

COMPATIBILITY: Carbaryl 90DF is compatible with a wide range of pesticides. It has been used without plant injury with most common insecticides, miticides, fungicides, nutrients, adjuvants, and petroleum oil as used on citrus. If compatibility of Carbaryl 90DF with another product and the resulting crop response are 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 90DF to 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 material such as Bordeaux, lime-sulfur and casein lime spreaders.

APPLICATION: On all crops use sufficient gallonage to obtain thorough and uniform coverage. Calibrate spray equipment to deliver the required amount. Use 50 mesh slotted strainers in spray system and 25 mesh slotted strainers behind nozzles. To clean spray system after use, drain and flush with 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, advanced instars and adults. Thorough and uniform spray coverage is essential for effective control. Carbaryl 90DF does not control spider mites. If spider mites are a problem, use a registered miticide.

CROP ROTATION: Subsequent planting of food and feed crops in treated soil must be made with crops on this or other carbaryl labels.



DIRECTIONS FOR USE THROUGH SPRINKLER IRRIGATION SYSTEMS

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

SPRAY PREPARATION: Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water.

APPLICATION INSTRUCTIONS: First prepare a suspension of Carbaryl 90DF in a mix tank. Fill tank with 1/2 to 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Add the required amount of Carbaryl 90DF, and then the remaining volume of water. (Suspension concentrations using the appropriate dosage per acre recommended on this label of Carbaryl 90DF per 1 to 4 gallons of water are recommended). Then set sprinkler to deliver 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the suspension of Carbaryl 90DF into the irrigation water line so as to deliver the desired rate per acre. The suspension of Carbaryl 90DF should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. If you should have any other questions about calibration, you should contact State Extension Service specialist, equipment manufacturers or other experts.

NOTE: When treatment with Carbaryl 90DF has been completed, further field irrigation over the treated area should be avoided for 24 to 48 hours to prevent washing the chemical off the crop.

GENERAL PRECAUTIONS FOR APPLICATIONS THROUGH SPRINKLER IRRIGATION SYSTEMS

Maintain continuous agitation in mix tank during mixing and application to assure a uniform suspension.

Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute solution per unit time.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

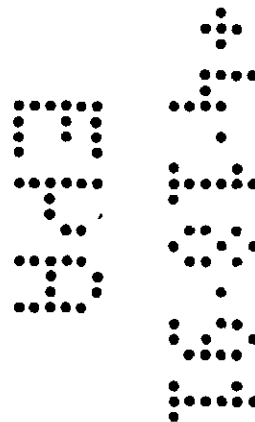
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Do not apply when wind speed favors drift, when system connection or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place.



FORAGE, FIELD AND VEGETABLE CROPS

Apply in sufficient spray volume to obtain thorough coverage. To prepare small volumes of spray, use 1 1/4 tablespoons of CARBARYL 90DF per gallon of water where rates of 1 1/8 pounds per acre or 1 1/8 pounds per 100 gallons are indicated in the table below.

CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPE DIRE
All Forage, Field and Vegetable Crops In This Section	Grasshoppers	5/8 to 1-2/3	See specific Forage, Field or Vegetable Crop	Use 5/8 nymphs o or spars in waste land, di borders. 1-2/3 lb grasshop tions to

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CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Alfalfa Clovers	Blister beetles, Mexican bean beetle	5/8 to 1 1/8	7 (Alfalfa) 0 (Clovers)	Observe plant response precautions.
	Alfalfa cater- pillar, Bean leaf beetle, Cucumber beetles, Green cloverworm, Japanese beetle, Leafhoppers, Three cornered alfalfa hopper, Thrips, Velvet- bean caterpillar	1 1/8		For alfalfa weevil larvae if pretreatment damage is extensive, cut alfalfa and treat the stubble. Use higher rate in areas east of the Rocky Mtns. On dense growth use 25 to 40 gallons per acre with ground equipment to ensure adequate coverage.
	Alfalfa weevil larvae, 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 1/8 to 1 2/3		Apply only once per cutting.
Asparagus	Asparagus beetle	1 1/8 to 2 1/4	1	Treat ferns or brush growth. Do not treat more than once every 3 days.
	Apache cicada Asparagus beetle	2 1/4 to 4 1/2	Post harvest applica- tion only.	

CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Beans (including blackeyed peas, cowpeas, crowder or southern peas, dry beans, green beans, lima beans, navy beans and snap beans) Lentils (except California)	Blister beetles, Mexican bean beetle	5/8 to 1-1/8	0 3 (cowpeas) 7 (lentils)	Observe plant response precautions.
	Alfalfa cater- pillar, Bean leaf beetle, Cucumber beetles, Flea beetles, Green cloverworm, Japanese beetle, Leafhoppers, Three cornered alfalfa hopper, Thrips, Velvet- bean caterpillar, Western bean cut- worm	1-1/8		
	Armyworm, Corn earworm, Cutworms, European corn borer, Fall army- worm, Stink bugs, Tarnished plant bug, Webworms	1-1/8 to 1-2/3		
	Alfalfa looper	1-2/3		
	Cowpea curculio	2-1/4		
	Corn earworm, Lima bean pod borer, Lygus bugs, Stink bugs	2-1/4		CALIFORNIA ONLY
Cabbage, Broccoli, Brussels Sprout, Cauliflower, Kohlrabi	Flea beetles, Harlequin bug	5/8 to 1-1/8	3	
	Armyworm, Corn earworm, Diamond- back moth, Fall armyworm, Import- ed cabbageworm	1-1/8 to 2-1/4		

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CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Chinese cabbage, Collards, Hanover salad, Horseradish, Kale, Mustard greens, Radishes, Rutabagas, Turnips	Flea beetles, Harlequin bug, Leafhopper	5/8 to 1-1/8	3 (horseradish, radishes, rutabagas and turnip roots)	
	Aster leafhopper	1-1/8 to 1-2/3		
	Armyworm, Corn earworm, Fall armyworm, Imported cabbage- worm, Stink bugs, Tarnished plant bug	1-1/8 to 2-1/4	14 (Chinese cabbage, collards, Hanover salad, kale, mustard greens, and turnip tops)	
Carrots, Celery, (except CA), Parsnips, Parsley	Flea beetles, Leafhoppers	5/8 to 1-1/8	0 (carrots)	Treat on a 5 to 7 day schedule.
	Aster leafhopper, Lygus bugs, Spittlebugs	1-1/8 to 1-2/3	3 (parsnips)	
	Armyworm, Corn earworm, Fall armyworm, Stink bugs, Tarnished plant bug	1-1/8 to 2-1/4	14 (parsley) (celery)	

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CROP	INSECT	POUND CARBARYL 90.../ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Corn (field, sweet, pop)	Armyworm, Chinch bugs, Corn ear- worm, Corn root- worm, adults, European corn borer, Fall army- worm, Flea beetles, Japanese beetle, Sap beetles, South- western corn borer, Leafhoppers	1-1/8 to 2-1/4	0	OBSERVE BEE CAUTION. For insects attacking silks and ears apply at 1 to 6 day intervals starting when first silks begin to dry. For larvae in whorl and foliage feeders, apply as necessary. Optimum timing and good coverage are essential for effective control. For optimum chinch bug control, apply at least 20 gallons of water per acre by ground and direct spray toward stalk to provide thorough cover- age. For optimum European corn borer control, do not apply in less than 3 gallons of water per acre by air and 15 gallons of water per acre by ground.
	Western bean cut- worm	2-1/4	0	Treat when infestation averages 15% and at 90% to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness.
	Cutworms	2-1/4 to 7-1/4	0	For broadcast appli- cation, use 7-1/4 pounds in at least 20 gallons (ground) or 5 gallons (air) of water per acre.

CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Cotton	Cotton fleahopper, Cotton leafworm, Flea beetles, Striped blister beetle, Thrips	5/8 to 1-1/8	7	Early season insect control.
	Boll weevil, Cotton bollworms, Cotton leafperforator, Fall armyworm, Leafrollers, Leaf- hoppers, Tarnished plant bug, Yellow striped armyworm (cotton cutworm)	1-1/8 to 2-1/4	7	Treat on a 5 to 7 day schedule for as long as control is necessary. Mid and late season insect control. May be applied after bolls open.
	Lygus bugs	1-1/8 to 2-1/4	7	For light to moderate population in western irrigated cotton.
	Pink bollworm	1-2/3 to 2-3/4	7	Aphid populations will be suppressed by repeated applications of this insecticide.
	Cutworms, Stink bugs, Saltmarsh caterpillar	2-1/4		
Cucumber, Melons, Pumpkin, Squash	Pickleworm, Melonworm	5/8 to 1-1/8	0	Observe plant response precautions. Avoid excessive appli- cations.
	Cucumber beetles, Flea beetles, Leafhoppers, Squash bugs	1-1/8		
Flax, Proso millet (except CA)	Armyworm	5/8 to 1-2/3	42	Do not graze treated areas or harvest for dairy feed prior to crop maturity.

CROP	INSECT	POUND CARBARYL 900F/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Dandelion, Endive (Escarole), Lettuce, Salsify	Flea beetles, Harlequin bug, Leafhoppers	5/8 to 1-1/8	3 (head lettuce & salsify roots)	Observe plant response precautions.
	Aster leafhopper, Lygus bugs, Spittlebugs	5/8 to 1-2/3	14 (dandelion, endive, leaf lettuce & salsify tops)	Treat on a 5 to 7 day schedule after heads begin to form.
	Armyworm, Corn earworm, Fall armyworm, Imported cabbageworm, Stink bugs, Tarnished plantbug	1-1/8 to 2-1/4		
Forage Grasses, Pasture	Armyworm, Black grass bugs, Chinch bugs, Essex skipper, Fall armyworm, Range caterpillars, Range crane fly, Striped grass looper, Thrips	1-1/8 to 1-2/3	0 (aerial application) 14 (ground application)	To control thrips in grasses grown for seed, use high spray pressure to improve penetration into boot. Apply a mini- mum of 2 applications per year. Allow at least 14 days between application. Carefully mark swath to avoid over application.
	White grubs (green June beetle)	1-2/3 to 2-1/4		
Garden beet, Spinach, Swiss chard	Flea beetles, Harlequin bug, Leafhoppers	5/8 to 1-1/8	3 (garden beet roots)	Treat on a 5 to 7 day schedule.
	Aster leafhopper	1-1/8 to 1-2/3	14 (garden beet tops, Spinach, Swiss chard)	
	Armyworm, Corn earworm, Fall armyworm, Stink bugs, Tarnished plant bug	1-1/8 to 2-1/4		
Okra	Corn earworm, Stink bugs	1-1/8 to 2-1/4	0	Treat on a 5 to 7 day schedule.

CROP	INSECT	POUND. CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Peanuts	Blister beetles, Mexican bean beetle	5/8 to 1-1/8	0	
	Alfalfa caterpillar, Bean leaf beetle, Cucumber beetles, Green cloverworm, Japanese beetle, Leafhoppers, Red-necked peanutworm, Three cornered alfalfa honper, Thrips, Velvet-bean caterpillar	1-1/8		
	Armyworm, Corn earworm, Fall armyworm, Stink bugs, Webworms	1-1/8 to 1-2/3		
	Whitefringed beetle adults, Cutworms	2-1/4		
Peas	Colorado potato beetie, Leaf-hoppers	1-1/8	3	
	Armyworms	1-1/8 to 1-2/3		
	Alfalfa caterpillar, Cutworms, Pea leaf weevil, Pea weevil, Yellow striped armyworm	1-2/3		
	Alfalfa looper	2-3/4		
				WASHINGTON STATE ONLY

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CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Potato Tomato Eggplant Pepper	Colorado potato beetle, Flea beetles, Leaf-hoppers	5/8 to 1-1/8	0	Thorough coverage is essential to effectively suppress stink bugs. When disease transmission is suspected, monitor fields following application and re-treat if reinfestation occurs.
	European corn borer, Fall armyworm, Lace bugs, Stink bugs, Tarnished plant bug, Tomato fruitworm, Tomato hornworm, Tomato pinworm	1-1/8 to 2-1/4		
	Cutworms	2-1/4		
Prickly Pear Cactus	Cochineal scale (crawlers)	2-1/4	1	Apply as needed at 7-10 day intervals. Do not make more than 7 applications per season.
Rangeland	Black grass bug, Mormon cricket, Range caterpillars, Range crane fly	5/8 to 7/8	0 (Aerial application) 14 (Ground application)	For aerial applications only. Apply a maximum of 2 applications per year. Allow at least 14 days between applications. Carefully mark swath to avoid over application.

CI	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Rice	Armyworm, Chinch bugs, Fall armyworm, Stink bugs	1-1/8 to 1-2/3	14	Do not apply propanil herbicide within 15 days before or after CARBARYL 90DF application or plant injury will result (Mississippi Delta & Texas). Do not use on rice fields in which crayfish and/or catfish farming is included in the cultural practice (Mississippi Delta and Texas). CAUTION: May kill shrimp and crabs. Do not use in areas where these are important resources.
	Armyworm, Leafhoppers, Tadpole shrimp	2-1/4		CALIFORNIA ONLY. For optimum tadpole shrimp control apply to water when pest first appears.
Sorghum (milo, grain sorghum, sweet sorghum, and hybrids)	Armyworm, Chinch bugs, Corn earworm, Fall armyworm, Stink bugs, Webworms	1-1/8 to 2-1/4	21 (grain) 0 (forage)	Direct spray into forming heads for optimum insect control. For chinch bugs use high gallonage ground application directed at the base of plants. This product may not effectively control the Southern green stink bug. Treat for sorghum midge when 25 to 30 percent 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 planted sorghum or if midge are abundant.
	Sorghum midge, Southwestern corn borer	1-2/3		
	Cutworms	2-1/4		

CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Soybeans	Bean leaf beetle, Cucumber beetles, Green cloverworm, Mexican bean beetle, Velvet- bean caterpillar	5/8 to 1-1/8	0	Do not apply a combina- tion of CARBARYL 90DF and 2,4-DB herbicides to soybeans. Use lower rate for light to moder- ate populations. To control heavy infestat- ions, use higher rate.
	Corn earworm	5/8 to 1-2/3		
	Blister beetles, Grape colaspis	5/8 to 1-1/8		
	Alfalfa cater- pillar, Japanese beetle, Leaf- hoppers, Three cornered alfalfa hopper, Thrips	1-1/8		
	Armyworm, Cut- worms, Fall army- worm, Stink bugs, Webworms	1-1/8 to 1-2/3		
	Painted lady (Thistle cater- pillar), Salt- marsh caterpillar, Woollybear cater- pillar, Yellow striped armyworm	1-2/3 to 2-3/4		
Sugar beets	Armyworm, Beet leaf beetle, Fall armyworm, Flea beetles, Leaf- hoppers, Webworms	1-1/8 to 1-2/3	14	
	Cutworms	1-2/3		

CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Sunflower (except CA)	Cutworms	1-2/3	60	
	Armyworm, Fall armyworm, Sun- flower moth	1-2/3 to 2-1/4		
	Stem weevil, Sun- flower beetle	1-1/8 to 2-1/4		
Sweet Potato (except CA)	Corn earworm, Cucumber beetles, Flea beetles, Sweet potato hornworm, Tortoise beetles	1-1/8 to 2-1/4	0	Apply as a foliar spray as needed.
	Yellow striped armyworm	2		
	Sweet Potato weevil	1 to 2		Full coverage of plants is essential. Use lower rate on young plants and higher rate on mature plants.

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CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Wasteland Rights-of-way, Hedgerows, Ditchbanks, Roadsides	Black grass bug, Mormon cricket, Range caterpillars Range crane fly	5/8 to 1-1/8	0 (aerial) 14 (ground)	Apply a maximum of 2 applications per year. Allow at least 14 days between applications. Do not allow foraging or cut for hay within 14 days of last application by ground. Aerially treated areas may be grazed or cut for hay on day of treatment. Carefully mark swath to avoid over application.
Wheat (including triticale) (except CA)	Flea beetles	5/8 to 1-1/8	0 (forage)	Application is effective against eggs, larvae, and adult of the cereal leaf beetle.
	Cereal leaf beetle	1-1/8		
	Armyworm, Fall armyworm	1-1/8 to 1-2/3	21 (grain)	

CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Tobacco	Tobacco Flea beetle	1-1/8 lbs./50 gal. and apply 6 gal. of spray/100 square yards	0	IN PLANT BEDS To prevent injury, avoid excessive applications.
	Green June beetle grubs	5/8 lb./100 gallons		Apply only to areas that larvae have uprooted by sprinkling as a drench with 50 to 100 gallons per 100 square yards.
	Budworms, Fall armyworms, Flea beetles, Hornworms, Japanese beetle, June beetle, Suckfly	1-1/8 to 2-1/4		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 priming or cutting.

TREE F AND NUT CROPS

For dilute sprays apply the specified dosage per 100 gallons of water. For concentrate and aerial sprays, increase the concentration of CARBARYL 90DF 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 gallonages per acre range from 200-300 gallons for dilute sprays; 30-100 gallons for concentrate sprays and 10-25 gallons for aerial sprays. Do not exceed maximum label rate per acre per application.

CROP	POUNDS OF CARBARYL 90DF/100 GAL	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
APPLE THINNING			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 90DF, exercise caution to avoid possible yield reduction.
Apples only	1/3 to 5/8	1	For easily thinned varieties including Cortland, Grimes, Jonathan, McIntosh, Orleans, Rome Beauty, Puritan, Red Delicious, Winesap, Yellow Newton.
	5/8 to 1-1/8	1	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.

CROP	INSECT	POUNDS OF CARBARYL 90DF/100 GALS.	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Almond	Peach twig borer, San Jose scale, Fruittree leaf- roller	1-1/8	28	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.
	Navel orangeworm			Time early or mid-season applications to cor- respond 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 5-1/2 pounds per acre.
Apples Pears	Apple aphid, Apple rust mite, Apple sucker, Bagworms, California pear- slug(pear sawfly), Codling moth, Eye- spotted bud moth, Green fruitworm, Lecanium scales, Lesser appleworm, Lygus bugs, Orange tortrix, Oyster- shell scale, Pear leaf blister mite, Pear psylla, Pear rust mite, San Jose scale, Tenti- form leafminers, Woolly apple aphid	7/8 to 1-1/8	1	WEST OF ROCKY MTS. 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 pre- sent.

CR	INSECT	POUNDS O. CARBARYL 90DF/100 GALS.	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Apples, Pears (Cont.)	Apple mealybug, Apple aphid, Codling moth, White apple leaf- hopper	5/8	1	EAST OF ROCKY MTS. To avoid undesired apple thinning, delay use until at least 30 days after full bloom. For optimum scale control apply when crawlers are present.
	Apple maggot, Apple rust mite, Bagworms, Eastern tent caterpillar, European apple sawfly, Eyespotted bud moth, Forbes scale, Fruit tree leafroller, Green fruitworm, Japan- ese beetle, Lecanium scales, Lesser appleworm, Oystershell scale, Pear psylla, Pear leaf blister mite, Pear rust mite, Periodical cicada, Plum curculio, Red- banded leafroller, Rosy apple aphid, San Jose scale, Tarnished plant bug, Tentiform leafminers, Woolly apple aphid, Yellowheaded fire- worm	1-1/8		

C	INSECT	POUNDS CARBARYL 90L	0 GALS.	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Citrus Fruit (such as grapefruit, lemons, limes, oranges, tangelos, tangerines, citrus citron, kumquats and hybrids)	Avocado leaf-roller, California orangedog, Citrus cutworm, Citrus root weevil, Fruit-tree leafroller, Orange tortrix, Western tussock moth, West Indian sugarcane borer (adults)	1-1/8		5	Do not apply more than 22-1/4 lbs. of CARBARYL 90DF per acre per application. Do not apply less than 10 gallons of dilute spray mixture per mature tree. May be mixed with petroleum oils commonly used on citrus.
	Black scale, Brown soft scale, California red scale, Citricola scale, Citrus snow scale, Yellow scale	7/8 to 1-1/8			
Filbert	Filbert aphid, Filbert leafroller, Filbertworm	1-1/8		0	Apply when leafroller eggs are hatching. Repeat on first appearance of adult filbert moths and again 3 to 4 weeks later.
Olives	Olive scale	7/8 to 1-1/8		0	For optimum scale control, add 1-1/2 gallons of summer oil and apply mixture when crawlers are present. Do not exceed 2 applications per year. Do not apply more than 16-2/3 lbs. of CARBARYL 90DF per acre per application.

CROP	INSECT	POUNDS OF CARBARYL 90DF/100 GALS.	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Peaches, Apricots, Nectarines	Apple pandemis, Codling moth, Cucumber beetle, European earwig, Fruittree leaf- roller, Japanese beetle, June beetle, Lecanium scales, Lesser peachtree borer, Olive scale, Orange tortrix, Oriental fruit moth, Peach twig borer, Periodical cicada, Plum cur- culio, Redbanded leafroller, San Jose scale, Tar- nished plant bug, Tussock moth, Variegated leaf- roller	1-1/8	1 (peaches) 3 (apricots & nectarines)	Do not apply more than 6-2/3 lbs. of CARBARYL 90DF per acre per appli- cation to apricots. For optimum scale control apply when crawlers are present. Spray limbs and trunks thoroughly, weekly during moth flight.
Pecans	Black margined aphid, Fall web- worm, Hickory shuckworm, Lesser webworm, Pecan leaf phylloxera, Pecan nut case- bearer, Pecan spittlebug, Pecan weevil, Twig girdler, Walnut caterpillar	1-1/8 to 2-3/4	0	Do not apply more than 8 pounds of CARBARYL 90DF per acre per application.

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CROP	INSECT	POUNDS OF CARBARYL 90DF/100 GALS.	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Plums, Prunes, Cherries	Black cherry aphid, Brown soft scale, Cherry fruitworm, Cherry maggot, European earwig, Eyespotted bud- moth, Forbes scale, Fruittree leaf- roller, Green fruitworm, Japan- ese beetle, Lecanium scales, Lesser peachtree borer, Mealy plum aphid, Oystershell scale, Peach twig borer, Plum cur- culio, Prune leaf- hopper, Redbanded leafroller, Rose chafer, San Jose scale, Variegated leafroller	1-1/8	1	Do not apply more than 6-2/3 lbs. of CARBARYL 90DF per acre per appli- cation. For optimum scale control, apply when crawlers are present. For lesser peach tree borer control, spray limbs and tree trunks thoroughly weekly during moth flight.
	Codling moth, Eastern tent caterpillar, Orange tortrix, Tussock moth	7/8		

CROP	INSECT	POUNDS OF CARBARYL 90DF/100 GALS.	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Walnut	Calico scale, European fruit lecanium, Filbert- worm, Fruittree leafroller, Frosted scale, Codling moth	5/8	0	For codling moth, apply first spray when average cross sectional dia- meters of developing nuts are 1/2 to 3/4 inch. Repeat during middle or late June as needed. Spray tree trunks to point of run-off.
	European earwig	2-1/4		

SMALL FRUIT CROPS

Recommended dosages refer to pounds of CARBARYL 90DF per acre. The optimum spray gallonage will depend on plant size, density and stage of growth. Typical spray gallonages per acre range from 100-300 gallons for dilute sprays, 30-100 gallons for concentrate sprays, and 10-25 gallons for aerial sprays. Do not exceed maximum label rate per acre per application.

CROP	INSECT	POUNDS OF CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Blackberries, Raspberries, Dewberries (inclu- ding boysenberries and loganberries)	European raspberry aphid, Japanese beetle, Leafhoppers, Leafrollers, Rose chafer, Snowy tree cricket	1-1/8 to 2-1/4	7	
	Omnivorous leaf- roller, Raspberry sawfly	2-1/4		CALIFORNIA ONLY
Blueberries	Blueberry maggot, Cherry fruitworm, Cranberry fruit- worm, European fruit lecanium, Japanese beetle	1-2/3 to 2-1/4	0	Apply 3 weeks before harvest and repeat as necessary.

(INSECT	POUNDS CARBARYL 90DF/ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Cranberries	Cutworms, Cranberry fireworms, Cranberry fruitworms, Japanese beetle, Leafhopper, Rose chafer	1-2/3 to 3-1/3	1	Apply in late bloom and as needed at 7 to 10 day intervals.
Grapes	European fruit lecanium, Grape leaffolder, Grape leafhopper, Western grapeleaf skeletonizer, Western yellow-striped armyworm	1-1/8 to 2-1/4	7	Apply before first brood leaffolder larvae emerge from rolls.
	Cutworms, Eight-spotted forester, Grape berry moth, Japanese beetle, June beetle, Orange tortrix, Omnivorous leafroller, Redbanded leafroller, Salt-marsh caterpillar	2-1/4		
Strawberries	Flea beetle, Meadow spittlebug, Omnivorous leaf-tier (strawberry fruitworm), Strawberry leafroller, Strawberry weevil	1-1/8 to 2-1/4	1	CARBARYL 90DF may injure Early Dawn and Sunrise varieties on the Delmarva Peninsula.

TREES AND ORNAMENTALS

For control of certain insects on trees, ornamentals, woody plants and shrubs, apply the recommended amount of Carbaryl 90D 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.

INSECTS	POUNDS OF CARBARYL 90DF PER 100 GALLONS	SPECIFIC DIRECTIONS
Ants, Apple aphid, Armyworm, Azalea leafminer, Bagworms, Birch leafminer, Blister beetle, Boxelder bug, Boxwood leafminer, Brown tail moth, Cankerworms, Catalpa sphinx, Chiggers, Cutworms, Cypress tip moth, Eastern spruce gall adelgid, Elm leaf aphid, Elm leaf beetle, Elm spanworm, Eriophyid mites, European pine shoot moth, Fall armyworm, Flea beetles, Fuschia gall mite, Fullar rose beetle, Gall midges, Gall wasps, Greenstriped mapleworm, Grasshopper Gypsy moth, Hackberry nipplegall maker, h bud moth, Holly leafminer, Jackpine budwo. Japanese beetle, Jeffrey pine needleminer, June beetles, Lace bugs, Leafhoppers, Leaf-rollers, Locust borer, Maple leafcutter, Mealybugs, Mimosa webworm, Nantucket pine tip moth, Oak leafminers, Oak leaf skeletonizer, Oak moth, Oakworm complex, Oleander 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, Redhumped oakworm, Rose aphid, Rose chafer, Roseslug, Saddled prominent caterpillars, Sawflies (exposed), Scale insects, Sowbugs, Spiny elm caterpillar, Springtails, Spruce needleminer, Subtropical pine tip moth, Tent caterpillars, Thrips (exposed), Thorn bug, Ticks, Tree hoppers, Walnut caterpillar, Webworms, Western hemlock looper, Willow leaf beetles, Yellow poplar weevil	1-1/8	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.

Bal wig aphid, Cooley Spruce gall adelgid, Doug. fir tussock moth, Spruce budworm, Western Spruce budworm	1-1 1/4	Use the higher rate when large lar or heavy populations are present.
Ips engraver beetles, Mountain pine beetle, Roundheaded pine beetle, Spruce beetle, Western pine beetle	17-3/4	Effective for beetle control or as a protective treatment. Apply 1 gallon of spray per 50 square feet of bark prior to beetle flight of 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 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.

LAWN AND RECREATIONAL AREAS

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 pests populations, advanced instars and dense vegetation. Repeat treatment as necessary. Do not allow public use of treated areas during applications or until sprays have dried.

SITE	INSECT	AMOUNT OF CARBARYL 90DF		SPECIFIC DIRECTIONS
		OZ. PER 1000 SQ. FT.	POUNDS ACRE	
Turf grasses	Ants, Armyworm, Centipedes, Chiggers, Cutworms, Earwigs, Essex skipper, European chafer, Fall armyworm, Fiery skipper, Grasshoppers, Green June beetle grub, June beetles, Leafhoppers, Lucerne moth, Millipedes, Mosquitos (adults), Sowbugs, Spittlebugs, Springtails, Ticks, Yellowstriped armyworm	3/4 to 1-1/2	2-1/4 to 4-3/8	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.

SITE	INSECT	AMOUNT OF CARBARYL 90DF		SPECIFIC DIRECTIONS
		OZ. PER 1000 SQ. FT.	POUNDS ACRE	
Turf grasses (cont.)	Chinch bugs,	2-1/2	6-2/3	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 Mole Cricket Control: Treatment should be made the afternoon or early evening following turf grass irrigation. Do not irrigate treated areas following insecticide application. For Sod Webworm Control: Do not irrigate treated areas following insecticide application.
	Mole crickets Sod webworms (lawn moths)	to 3	to 8-7/8	
	Bluegrass bill- bug, European crane fly, Fleas, White grubs (such as Japanese beetle, Chafer beetle, and Phyllophaga spp. larvae)	3	8-7/8	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 CARBARYL 90DF/ VOLUME OF WATER	SPECIFIC DIRECTIONS
Lawns, Cemeteries and Recreational Areas (including turf, golf courses, and parks)	1 2/3 pounds or	Apply a total of 2 gallons of the diluted solution over the surface of each mound or at least 1 quart per 6 inches of mound diameter using a bucket, can or other appropriate equipment. Thoroughly wet mound and surrounding area to a 4 ft. diameter (12 sq. ft). Do not disturb mounds prior to treatment. Pour solution from a height of about three feet to give sufficient force to break mound apex and flow into ant tunnels. For best results apply in cool weather, 65-80 degrees F, or in early morning or late evening hours. Repeat applications 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.
Pastures, Rangeland, Forested Lands and Wasteland	3/4 tablespoon/gal.	
Nursery Stock, Vegetable Transplants, Foliage Plants and Bedding Plants	1 2/3 pounds/100 gals.	DO NOT USE ON ANY FOOD CROP NOT LISTED ON THE 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.

CONTROL OF TICKS WHICH TRANSMIT LYME DISEASE

SITE	SPECIFIC DIRECTIONS
Lawns and Recreational Turfgrass (Including: Lawns and Perimeters, Golf Courses, Sports Fields, Cemetaries, Parks, and Pastures) Shrubs, Ornamentals, Wooded Areas (Including: Military Posts, Logging camps, and Campsites) Wastelands	For control of juvenile and adult Ixodes spp. ticks (Deer tick, Bear tick, and Black legged tick) and Amblyomma spp. ticks (Lone Star tick), apply at the rate of 1 ounce per 4 gallons of water. Begin applications in late spring or early summer (May/June). Thoroughly treat entire turf area, shrub beds, ornamental plantings, wooded areas, and around outside perimeters of homes/buildings where exposure to ticks may occur. Repeat at 3 to 4 week intervals since ticks may be reintroduced from surrounding areas by animals.

For the 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.

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.

CROP	POUNDS OF CARBARYL 90DF	SPECIFIC DIRECTIONS
Pastures Rangelands, Yards, Parks, Recreational Areas, Logging Camps, Military Posts and Adjacent Forested Lands or Wastelands	1/3 to 1-1/8	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 1/3 to 5/8 lb. per 100 gallons in mistblower, 5/8 to 1-1/8 lbs. per acre in aerial sprays and 1-1/8 lbs. per acre in low pressure ground sprayers. Do not use where shrimp and crabs are important resources. Observe bee caution.
	27-3/4	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.

PEST CONTROL AROUND BUILDINGS

INSECT	POUNDS OF CARBARYL 90DF/ 100 GAL.	SPECIFIC DIRECTIONS
Ants, Cockroaches	22-1/4	For external use around buildings only. 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.
Brown dog tick, Earwig, Flea, Millipede, Silverfish	11-1/4	

POULTRY ROOSTS AND BUILDINGS ONLY

POULTRY QUARTERS	POUNDS OF CARBARYL 90DF/ 100 GAL.	SPECIFIC DIRECTIONS
Bed bug, Chicken mite, Flea, Lice, Northern fowl mite	4-1/2	DO NOT TREAT POULTRY OR GAME BIRDS. Apply 1 to 2 gallons of spray mixture per 1,000 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	17-3/4	
Lesser mealworm	55-1/2	Apply 2 gallons of spray mixture per 1,000 square feet of floor space or litter surface. Repeat as needed. Ventilate while spraying. Do not treat premises within 7 days of slaughter.

