

# CARBARYL SPRAYABLE INSECTICIDE

## ACTIVE INGREDIENT:

Carbaryl (1-naphthyl N-methylcarbamate)

## INERT INGREDIENTS:

80%

20%

TOTAL

100%

NET WEIGHT 10 LBS.

EPA REG. NO. 2749-204

## CAUTION: KEEP OUT OF THE REACH OF CHILDREN.

**Harmful if inhaled or swallowed. Avoid breathing of dust or spray. Do not take internally. Avoid contact with skin. Wear protective clothing. Change to clean clothing daily. Wash hands and face before eating. Wash thoroughly after handling.**

**In case of contact, flush with plenty of water. For eyes — get medical attention.**

**NOTE TO PHYSICIAN: CARBARYL is a moderate, reversible cholinesterase inhibitor. Antidote is Atropine.**

**This product is toxic to fish and wildlife. Birds and other wildlife in treated areas may be harmed. Keep out of lakes, streams or ponds. Do not contaminate water by cleaning of equipment or disposal of waste.**

**This product is highly toxic to bees exposed to direct treatment or residues on crops. Protective information may be obtained from your Cooperative Agricultural Extension Service.**

**Do not store near or contaminate feed or foodstuffs.**

**Do not reuse empty container. Destroy empty container by perforating or crushing and burying in a safe place.**

## GENERAL INFORMATION

CARBARYL SPRAYABLE is a dry powder for dispersion in water and application as an insecticide spray in hydraulic sprayers, mist blowers, low gallonage ground equipment and Airplanes.

## COMPATIBILITY

1. CARBARYL SPRAYABLE has been effectively used without plant injury with common insecticides and fungicides except (a) where mixtures have contained a number of pesticides or (b) under adverse conditions such as high humidity, drought, improper fertilization, etc.
2. CARBARYL SPRAYABLE forms a finely divided uniform suspension alone and when combined with many other pesticides. Incompatible mixtures curdle or precipitate and may injure crops or reduce control. Compatibility can be affected by water in your locality, various surfactants and other formulation ingredients. Do not apply if physically incompatible.
3. Do not mix CARBARYL SPRAYABLE with nutrients or adjuvants (or with more than one other pesticide) unless your experience indicates that the mixture is safe and effective. If uncertain, prepare a small amount of the mixture and test on a representative portion of the crop.
4. Compatible with petroleum oil as used on citrus. Do not use with summer oils or deciduous fruits.
5. Unstable under highly alkaline conditions. Not effective if used with alkaline materials such as Bordeaux lime, lime sulfur and casein lime spreaders.

## GENERAL CAUTIONS

1. To avoid possible injury on tender foliage, do not apply when foliage is wet or when rain or excessive humidity is expected during the next two days.
2. Does not control spider mites but is compatible with common miticides.
3. For protection of honeybees avoid use, if possible, during periods when honeybees are visiting the crop or neighboring crops. When necessary to use during such periods, carbaryl spray should be applied in the early morning or late evening when the bees are not flying.

## SPECIAL DIRECTIONS

### FOR PREPARING LOW GALLONAGE SPRAYS

In low gallonage ground equipment: Use 56 mesh or coarser screens. Coarse screen nozzles should be cone type, number 3 or larger. Use clean equipment. Put about 1/4 of the required water volume in the spray tank. Close off booms, start pump and maintain moderate bypass agitation while slowly adding the proper amount of CARBARYL SPRAYABLE. Add remaining water and continue to recirculate until suspension is formed, then apply using at least 3 gallons per acre of the prepared spray. After spraying, flush tank and lines with clear water.

For airplane application: For preparing spray in mixing or storage tank, follow directions above. To maintain uniform suspension, recirculate at intervals and before pumping into airplane tank. For best results, use clean equipment and apply 1 to 3 gallons per acre of the prepared spray. After spraying, flush tanks and lines with clear water.

Combination spray mixtures in low gallonage equipment and airplanes. Physical compatibility of CARBARYL SPRAYABLE with other pesticides in low gallonage mixtures is not fully known. Before preparing large amounts, combinations should be tested by fully dispersing CARBARYL SPRAYABLE, then adding the other pesticide and the remaining portion of water. DO NOT USE MIXTURES THAT CURDLE OR PRECIPITATE. Incompatibility will reduce insect control and may cause mechanical difficulties or plant injury. Use caution when applying concentrate spray mixtures. Under adverse growing conditions, combinations of CARBARYL SPRAYABLE with some phosphate pesticides may cause fatal injury.

## DOSAGE ACREAGE CONVERSION TABLE

Select the correct rate per acre to control the specific insect pest and use this chart to find the number of bags needed to treat the infested acreage.

Rate per Acre	10 Pound Bag
CARBARYL SPRAYABLE	771377
2 3 pound	16 acres
1 pound	10 acres
1 1/4 pounds	8 acres
1 7/8 pounds	5 1/3 acres
2 1/2 pounds	4 acres
3 1/8 pounds	3 1/5 acres

## IMPORTANT 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 CARBARYL is used in accordance with label directions. Pre harvest and grazing use limitations are listed at the end of the directions for each crop use. Where no pre harvest or grazing time limitations are stated, applications can be made to the day of harvest and crops can be grazed without time delay if directions for use on the crop are followed. If CARBARYL insecticide is used in accordance with label directions, forage, feed and other crops, including almond hulls, bean vines, carrot tops, citrus pulp, cotton frarage, cowpea hay, peanut hay, pea vines, rice straw, rye straw, soybean hay, and sugar beet tops, may be grazed or harvested for use as feed for dairy and meat animals, without resulting in residues in milk or meat.

## DIRECTIONS FOR USE

### COTTON INSECT CONTROL

Recommended dosages refer to pounds of CARBARYL SPRAYABLE per acre. Use at least 3 gallons of mixed spray per acre and increase to higher gallonage on larger plants.

Use 1 1/4 to 2 1/2 pounds, depending on the size of the cotton and insect population level for mid and late season boll weevil, bollworm, fall armyworm, cotton leaf perforator, leaf rollers, leafhoppers and tarnished plant bug. Also for light to moderate infestations of Lygus bugs in Western cotton. Application should be made every 5 to 7 days as long as control is necessary.

### COTTON INSECT CONTROL

Use 2 3 to 1 1/4 pounds for early season thrips, flea beetles, cotton fleahopper, striped blister beetle and cotton leafworm.

Use 1 7/8 to 3 1/8 pounds for pick bollworm on a 5 to 7 day basis schedule depending on the size of the cotton and degree of infestation.

Use 2 1/2 pounds for stink bugs and salt marsh caterpillar.

Use 2 3 to 1 7/8 pounds for grasshoppers. The highest dosage should be used when grasshoppers are mature or material is applied on partly defoliated plants.

APHID populations will be suppressed by repeated applications of this insecticide. CARBARYL does not control spider mite. Where infestations are encountered, use a recommended miticide.

May be applied after bolls open.

Do not apply within 7 days of harvest or grazing or use for feed or bedding for dairy or

#### **FORAGE AND FIELD CROP INSECT CONTROL**

Recommended dosages refer to pounds of CARBARYL SPRAYABLE per acre. Use sufficient spray gallons to insure thorough coverage. This will usually vary from 5 to 40 gallons per acre depending on equipment, degree of insect infestation and stage of crop growth. Keep spray mixture well agitated. Apply when insects or their damage appear and repeat 7 to 14 days later if necessary. See specific directions below for grasshopper control.

**ALFALFA CLOVERS COWPEAS PEANUTS and SOY BEANS** Use 2 1/2 to 1 1/4 pounds for blister beetles and Mexican bean beetle. Use 1 1/4 pounds for alfalfa caterpillar, bean leaf beetle, cucumber beetles, green cloverworm, Japanese beetles, leaf hoppers, three-cornered alfalfa hopper, thrips and velvet bean caterpillar. Use 1 1/4 to 1 7/8 pound for armyworms, corn earworms, stink bugs and webworms. Use 1 1/4 pounds (Western United States) and 2 pounds (Eastern United States) for control of alfalfa weevil larvae in the spring. If pre-treatment damage is extensive, cut the alfalfa and make the application to the stubble.

On Cowpeas only use 2 1/2 pounds for cowpea curculio. Apply 4 applications beginning at first bloom and at 5 day intervals thereafter.

To avoid possible injury on tender foliage do not apply when foliage is wet or when rain or excessive humidity is expected during the next two days.

**WARNING** Do not apply a combination of CARBARYL SPRAYABLE and 2 4 DB herbicide (such as "Butyrac" 175 or "Butoxone" SB) to soybeans.

**RICE** (In the Mississippi Delta and Texas) Use 1 1/4 to 1 7/8 pounds for armyworms and stink bugs.

**WARNING** To avoid plant injury, do not apply before heading if propane (such as "Stam" F 34 or "Rogue") has been or will be applied.

**RICE** (In California) Use 2 1/2 pounds for tadpole shrimp. For optimum tadpole shrimp control apply to the water when the pest first appears.

**WARNING** To avoid plant injury, do not apply within 15 days of propane such as "Stam" F 34 or "Rogue".

#### **DO NOT APPLY WITHIN 14 DAYS OF HARVEST**

**FORAGE GRASSES AND PASTURE** Use 1 1/4 to 1 7/8 pounds for armyworms and thrips. For thrips control in grasses grown for seed, high spray pressure may help penetration into boot.

**SORGHUMS** (including MILO and GRAIN SORGHUM) Use 1 1/4 to 2 1/2 pounds for armyworms, corn earworm, stink bugs and webworms. Use 1 7/8 pounds for sorghum midge. For optimum insect control on grain sorghum, direct spray into the forming heads. Treat for sorghum midge 3 to 4 days after heads have emerged from boot.

#### **DO NOT APPLY WITHIN 21 DAYS OF HARVEST OF GRAIN**

No time limitation on sorghums used for forage.

**SUGAR BEETS** Use 1 1/4 to 2 1/2 pounds for armyworms, leafhoppers and webworms.

#### **DO NOT APPLY WITHIN 14 DAYS OF HARVEST**

##### **GRASSHOPPERS**

Apply 2 3 to 1 7/8 pounds as often as necessary to control grasshoppers on the above forage crops. Follow pre harvest and grazing use limitations listed for each of the above crops. A 2 3 to 1 1/4 pound rate is suggested for nymphs on small plants or sparse vegetation in wasteland, rangeland, ditch banks and borders. A 1 1/4 to 1 7/8 pound dosage should be used when grasshoppers are mature or material is applied to crops requiring greater coverage.

##### **TOBACCO INSECT CONTROL**

In Plant Beds: For tobacco flea beetle use 2 1/2 level tablespoons per gallon OR 1 1/4 pounds per 50 gallons. ~~and~~ apply 6 gallons per 100 square yards.

For green June beetle grubs use 2 3 pound per 100 gallons of water when insects or their damage appear. Apply only to areas that larvae have uprooted by sprinkling as a drench with 50 to 100 gallons per 100 square yards. May be applied before or after seeding. Avoid excessive application - plant injury may result. If late season applications are necessary, treat immediately after priming rather than before priming.

In Fields: For bedworms, flea beetles, Japanese beetles, June beetles and hornworms use 1 1/4 to 2 1/2 pounds per acre in sufficient water for full coverage of plants. Use lower rate on young plants up to knee high; higher rate on mature plants. Use at least 10 gallons per acre of the prepared spray. Begin treatments when worms are small. Avoid excessive application in plant buds as injury may result.

**NOTE** Treated fields may be entered immediately after foliage has dried. If late applications are made, wait until foliage has dried.

#### **VEGETABLE INSECT CONTROL**

Suggested dosages refer to pounds of CARBARYL SPRAYABLE per acre. Where a dosage range is indicated, use lower rate on young plants, higher rate on mature plants. Use sufficient spray gallons to obtain full coverage. Keep spray mixture well agitated. Apply when insects or their damage appear. Repeat at 5 to 7 day intervals or as needed, vary unless shorter interval is specified below.

**CORN** Use 1 1/4 to 2 1/2 pounds for corn earworm, corn rootworm adults, European corn borer, fall armyworm, flea beetles, Japanese beetles, sap beetles and leafhoppers. For larvae in corn (budworm damage) and foliage feeders apply to entire plant. Repeat as necessary. For insects attacking silks and ears, apply at 2 to 3 day intervals starting when first silks appear and continuing until silks begin to dry. Three or more applications may be required depending on severity of infestations. Timing and good coverage are absolutely essential for effective control.

Application of this product to the tassel region of corn during the pollen shed period will seriously reduce bee population.

**BEANS** (Green beans, lima beans, snap beans, cowpeas and black-eyed peas) Use 2 1/3 pound for Mexican bean beetle, 1 1/4 pounds for bean leaf beetle, cucumber beetles, flea beetles, Japanese beetle, leafhoppers, velvet bean caterpillar and western bean cutworm. Use 1 1/4 to 1 7/8 pounds for armyworms, corn earworms, stink bugs and tarnished plant bug. In California use 2 1/2 pounds for armyworms, corn earworm, lima bean pod borer, Lygus and stink bugs.

**ASPARAGUS** Use 1 1/4 to 2 1/2 pounds for asparagus beetle on seedlings or spears. Use 2 1/2 to 5 pounds for asparagus beetle and Apache cicada on ferns or brush growth in the just-harvest period. Do not apply more often than once every three days.

#### **DO NOT APPLY WITHIN 1 DAY OF HARVEST**

**CARROTS CHINESE CABBAGE COLLARDS DANDELION ENDIVE ESCAROLE GARDEN BEETS HORserADISH KALE LETTUCE MUSTARD GREENS, PARSLEY, PARsnips RADIShes RUTABAGAS SALsIFY SPINACH SWISS CHARD AND TURNIPS** Use 2 1/3 to 1 1/4 pounds for flea beetles, harlequin bugs and leafhoppers. To control six-spotted leafhopper (aster yellow vector) apply 1 1/4 to 1 7/8 pounds in a 5 to 7 day schedule. Use 1 1/4 to 2 1/2 pounds for armyworms, cabbage worms and loopers, corn earworms, tarnished plant bug and stink bugs. For optimum control of corn earworm after lettuce heads begin to form, use 2 1/2 pounds in a 5 to 7 day schedule. Where cabbage looper is the principal problem, use an alternative pesticide that is specifically recommended. For control of small cabbage loopers in commercial plantings after edible portions begin to form use 1 1/4 to 2 1/2 pounds in a 5 to 7 day schedule.

To avoid possible injury on lettuce, do not apply when foliage is wet or when rain or excessive humidity is expected during the next 2 days.

**NOTE** DO NOT APPLY within 3 days of harvest of head lettuce, garden beets, roots, horseradish, radishes, parsnips, rutabagas, salsify, roots, and turnip roots.

**DO NOT APPLY** within 14 days of harvest of chinese cabbage, collards, dandelions, endive (escarole), garden beets, tops, kale, leaf lettuce, mustard greens, parsley, salsify (tops), spinach, Swiss chard and turnip (tops).

No time limitation on carrots.

**CUCUMBER, MELONS, PUMPKIN, SQUASH** Use 2 1/3 to 1 1/4 pounds for pickleworm and melonworm, 1 1/4 pounds for cucumber beetles, flea beetles, leafhoppers and stink bugs. Avoid excessive applications.

To avoid possible injury on tender foliage do not apply when foliage is wet or when rain or excessive humidity is expected during the next two days. CARBARYL can be watered into melons in Florida.

**GARDEN PEAS** Use 1 1/4 pounds for leafhoppers, Colorado potato beetle. For Colorado potato beetle control apply to weeds in fields of garden peas to help prevent insect contamination in processed peas. Use 1 1/4 to 1 7/8 pounds for armyworms and grasshoppers.

**POTATO TOMATO EGGPLANT AND PEPPERS** Use 2 1/3 to 1 1/4 pound for Colorado potato beetle, flea beetles and leafhoppers. Use 1 1/4 to 2 1/2 pounds for European corn borer, fall armyworm, flea bugs, tomato fruitworm, tomato hornworm, tarnished plant bugs and stink bugs.

**KRAUT** Use 1 1/4 to 2 1/2 pounds for corn earworm and stink bugs. Repeat at 5 to 7 day intervals or as necessary.

**CABBAGE, BROCCOLI, BRUSSELS SPROUTS, CAULIFLOWER AND KOHLRABI** Use 2 1/3 to 1 1/4 pounds for flea beetles and harlequin bug. Use 1 1/4 to 2 1/2 pounds for armyworms, cabbage worms and loopers and corn earworm. Where cabbage looper is the principal problem, use an alternative pesticide that is specifically recommended. For control of small cabbage loopers in commercial plantings after edible portions begin to form use CARBARYL in a 5 to 7 day schedule.

## POULTRY INSECT CONTROL

### CHICKENS TURKEYS DUCKS GEESE GAME BIRDS AND PIGEONS

**DIRECTIONS** Spray on birds. Control northern fowl mite, chicken mite, lice and fleas by:

- Mixing with Electric Egg Machine. Mix 6 ounces of CARBARYL in one gallon of spray. Use 1 1/2 gallons per 1000 hens in cages, on litter or on slatted floor. Repeat in 4 weeks if necessary.
- Spraying with Knapsack or Cylinder Type Compressed Air Sprayers. Mix 4 ounces CARBARYL SPRAYABLE in 5 gallons of spray. Use 1 gallon per 100 hens in cages, on litter or on slatted floor. Repeat in 4 weeks if needed.

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

**Spray roosts and buildings** with conventional power spray or knapsack equipment. Control chicken mite, fleas and bed bugs by mixing 1 1/2 pounds per 25 gallons and applying at 1 to 2 gallons per 1000 square feet of wall, litter or roost surface. Increase dosage to 5 pounds per 25 gallons for fowl tick control. Force spray into cracks. Repeat as needed.

Ventilate while spraying. Avoid contamination of nests, eggs, and feeding and watering troughs.

### DO NOT APPLY TO POULTRY AND GAME BIRDS OR TO THEIR PREMISES WITHIN 7 DAYS OF SLAUGHTER

### TREE NUT INSECT CONTROL

Recommended dosages refer to pounds of CARBARYL SPRAYABLE per 100 gallons of dilute spray. Keep spray mixtures well agitated. Apply for full coverage in normal spray schedule.

**ALMOND** Use 1 1/4 pounds for peach twig borer, San Jose scale and fruit tree leaf roller. 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.

**FILBERT** Use 1 1/4 pounds for filbert aphid, filbert leafroller and filbert moth. A dilute spray of 400 gallons per acre is suggested apply when leaf roller eggs are hatching. Repeat on first appearance of adult filbert moths and again 3 to 4 weeks later.

### DO NOT APPLY AFTER HUSKS SPLIT

**WALNUT** Use 2 3 pounds for codling moth, frosty scale, European fruit lecanium scale, calico scale, filbertworm and fruit tree leaf roller. Spray 1000 gallons per acre for complete coverage. In concentrate sprays, use 6 pounds in at least 200 gallons per acre. For codling moth, first spray when average cross sectional diameters of developing nuts reaches 1 2 to 3 4 inch. Repeat during middle or late June as needed. Use 2 1/2 pounds for European carwy. Spray tree trunks to point of run-off.

### ORNAMENTAL INSECT CONTROL

CARBARYL SPRAYABLE at recommended concentrations can be used on a wide range of ornamental plants, flowers, shrubs and shade trees including rose, carnation, gladiolus, zinnia, chrysanthemum, lilac, arborvitae, juniper, hydrangea, azalea, elm, maple, oak, dogwood, birch and pines. CARBARYL injures Boston ivy. Use 1 1/4 pounds per 100 gallons when insects or their damage appear. Repeat weekly or as needed to control:

Apple aphid	Japanese beetle	Plant bugs
Bagworm	June beetles	Pine caterpillars
Birch leaf miner	Caterpillars	Psyllids
Blister beetles	Leafhoppers	Rice aphid
Buckwood leaf roller	Leaf rollers	Rose chig.
Buckeye borer	Moths	Scale insects
Chestnut aphid	Mimosa webworm	Tent caterpillars
Chestnut borer	Oak leaf miners	Thorn bugs
Flax beetles	Orange tortrix	Thrips (especially)
Gypsy moth	Peridical scales	Willow leaf beetles

### LAWN INSECT CONTROL

Use 1 1/4 pounds CARBARYL SPRAYABLE in 150 to 200 gallons of water for each 5000 square feet of established lawn area for the control of:

Ants	Eastern chinch	Millipedes
Chinch bugs	Flea	Mosquitos
Fire ants	Leafhoppers	Sod webworms

In Florida, Use 1 1/2 pounds for chinch bug control. Use garden hose sprayers or pressure type equipment and apply full water volume to insure good penetration of turf. For best results, mow lawn and apply immediately after rain or watering. Repeat 2 to 3 weeks later if necessary.

### ADULT MOSQUITOES

On pasture and rangelands, and non-agricultural lands, such as yards, parks, recreation areas, boating camps, military posts and adjacent forested lands or wastelands.

Use 1 3 to 2 3 pound per acre in mist blowers, 2 3 to 1 pound per acre in aerial sprays, or 1 1/4 pounds per acre in suitable low pressure ground equipment. Apply in sufficient spray gallonage to effectively cover areas to be treated. For optimum control apply early in morning or evening when air is calm and adult mosquitoes are active. Use 1 1/4 pounds per 100 gallons in hydraulic sprayers or 2 tablespoonsful per gallon in hand sprayers for treating backyards or other limited areas. Thoroughly cover lower shade tree foliage, shrubs, grass, weeds and shaded areas around buildings where adult mosquitoes

**CAUTION** May kill shrimp and crabs. Do not use in areas where shrimp and crabs are important resources pending further testing.

### PEST ON GLASS AND AIR-CONDITIONED BUILDINGS

For use by Pest Control Operators only.

In and around structures, restaurants, office buildings, homes, and other plants, farm barns, etc.

For cockroaches and ants use a 2.5% suspension. For brown dog ticks, earwigs and millipedes use a 1.0% suspension. See Mixing Directions below.

Apply as a coarse wet spray or with a paint brush and thoroughly treat cracks and crevices, baseboards, corners, walls, door frames and window sills, sleeping quarters of household pets, ant trails outside perimeter of dwellings and other areas where insects tend to congregate.

Do not use as a space spray. Repeat when necessary, but not more often than twice per week.

On interior and exterior wall surfaces, ceilings, eaves and roofs of dwellings constructed of wood, bamboo, metal, cement, brick, thatch or whitewashed clay.

For residual control of adult mosquitoes in subtropical and tropical regions, use a 2.5% suspension and apply at the rate of 1 quart prepared spray per 120 square feet of surface area (see Mixing Directions below). Repeat when necessary.

### MIXING DIRECTIONS

Gallons of Water Spray Desired	AMOUNT OF CARBARYL SPRAYABLE NEEDED TO MAKE	
	1 qt. Suspension	2.5% Suspension
3	5 ounces	12 ounces
5	8 ounces	1 1/4 pounds
10	1 pound	2 1/2 pounds

Do not use in edible product areas or food processing plants, restaurants or other areas where food is commercially prepared or processed. Do not use in serving areas where food is exposed.

Fresh bedding should be placed in animal quarters following treatment. DO NOT SPRAY ANIMALS. DO NOT SPRAY KENNELS OR OTHER ANIMAL AREAS UNTIL ANIMALS HAVE BEEN REMOVED. SEE CAUTION.

DO NOT TREAT RUGS, CARPETS, DRAPES AND OTHER FABRICS AS STAINING MAY RESULT. Avoid application to structural surfaces where visible spray residue and water stains are objectionable.

### FOREST INSECT CONTROL

Recommended dosages refer to pounds of CARBARYL SPRAYABLE to be sprayed per acre by aircraft. Keep spray mixtures well agitated. Addition of 1/4 cup of sticker per gallon of spray improves residual control of anchorworm and gypsy moth.

### EASTERN HARDWOODS

For fall cankerworm, use 5 8 pound in water to make 1 gallon. Apply at the rate of 1 gallon per acre. Apply when larvae are in first instars and leaves are 1 3 to 1 2 grown.

### EASTERN HARDWOODS, HEMLOCKS, PINES AND SPRUCES

For gypsy moth, use 1 to 1 1/4 pounds in water to make 1 gallon. Apply at the rate of 1 gallon per acre. Apply when larvae are in first instars. Best results are obtained if application can be delayed until leaves are 1 3 to 1 2 grown.

### ASPEN

For control of the Great Basin tent caterpillar, use 1 1/4 pounds in water to make 1 gallon. Apply at the rate of 1 gallon per acre. Apply when most larvae are in first instars.

### CITRUS INSECT CONTROL

Recommended dosages refer to pounds of CARBARYL SPRAYABLE per 100 gallons of water dilute spray. Keep spray mixtures well agitated. Apply only in full cover spray. Do not apply less than 10 gallons of spray mixture per mature tree.

### GRAPEFRUIT, LIMONS, LIMES, ORANGES, TANGERINES, TANGELOES, CITRUS

CITRON, KUMQUATS AND HYBRIDS OF THESE

Use 1 1/4 pounds for California orange, fog, citrus cultworm, fruit tree leaf roller, orange tortrix and western tussock moth. Use 1 to 1 1/4 pounds for black scale, brown soft scale, California red scale, citricola scale and yellow scale. Apply lower dosage early in season or against light infestation and the higher dosage late in the season or against heavy

#### DO NOT APPLY WITHIN 5 DAYS OF HARVEST OF THESE CROPS

**FREE FRUIT INSECT CONTROL** Use 1 to 1 1/4 pounds per acre for apple maggot, oriental fruit fly, plum curculio. Apply at petal fall and every 10 to 14 days thereafter until control is achieved.

Recommended dosages refer to pounds of CARBARYL SPRAYABLE per 100 gallons dilute spray. Keep spray mixtures well agitated. Apply for full coverage. Follow procedures or when insects or their damage appear. Refer to your state insecticide regulations.

#### APPLES AND PEARS

**West of the Rocky Mountains:** Use 1 to 1 1/4 pounds for apple sucker, green apple aphid, woolly apple aphid, bagworm, California pear slug, codling moth, apple rust mite, pear leaf blaster mite, pear rust mite, eye-spotted bud moth, green fruitworm, orange tortrix, pear psylla, tentiform leaf miners, Lecanium scales, oystershell scale and San Jose scale. For optimum scale control apply when crawlers are present. For psylla control apply when eggs hatch or when young nymphs are present. When heavy aphid infestations are present, repeated applications may be necessary for optimum control.

Application of CARBARYL within 30 days after full bloom may also provide apple thinning. To avoid this delay use until at least 30 days after bloom. Foliage injury may result from combination with summer oils.

**East of the Rocky Mountains:** Use 2-3 pounds for apply mealybug, green apple aphid, codling moth and white apple leafhopper. When heavy aphid infestations are present, repeated applications may be necessary for optimum control. Use 1 1/4 pounds for apple maggot, bagworm, eastern tent caterpillar, European apple sawfly, eye spotter, but moth, fruit tree leaf roller, green fruitworm, Japanese beetle, pear psylla, periodical cicada, plum curculio, red banded leaf roller, rose apple aphid, woolly apple aphid, apple rust mite, pear leaf blaster mite, pear rust mite, tarnished plant bug, tentiform leaf miners, Forbes scale, Lecanium scales, oystershell scale and San Jose scale. For optimum scale control apply when crawlers are present. To control rose apple aphids, apply before leaves are curled.

Application of CARBARYL within 30 days after full bloom may also provide apple thinning. To avoid this delay use until at least 30 days after bloom. May cause foliage injury if used before second cover on York and McIntosh apples.

#### DO NOT APPLY WITHIN 1 DAY OF HARVEST OF APPLES & PEARS

##### APPLE THINNING

Many factors influence the degree of apple thinning obtained with CARBARYL. These include tree age, variety and nutrition, previous crop, pruning, degree of sun, bloom weather and use of other chemical thinners. When any of these favor reduced fruit set, caution should be observed in applying CARBARYL so that excessive thinning and possible yield reduction will not occur. Recommended dosages refer to pounds of CARBARYL per 100 gallons dilute spray.

**CONCENTRATION:** Use 1/3 to 2/3 pound on easy-to-thinned varieties. Apply for full coverage. On hard-to-thin varieties use 2/3 to 1 1/4 pounds.

##### TIMING

Apply in one spray, timed between 10% to 25% bloom, just before bloom.

**VARIETAL RESPONSE:** Early thinned varieties include bland, crown, Jonathan, English Oriole, Home Beauty, Puritan, Red Delicious, Winesap and Yellow Newton. Difficult to thin varieties include Baldwin, Ben Davis, Duchess, Early McIntosh, Garden Delicious, Lady Apple, Northern Spy, Rhode Island Greening, Steele Red, Turkey Red, Wealthy, Yellow Transparent and York Imperial.

#### PEACHES, APRICOTS AND NECTARINES

Use 1 1/4 pounds for codling moth, mealybug, beetles, European hornworm, Japanese beetle, Pandemis moth, June beetle, lesser peach tree borer, orange tortrix, oriental fruit moth, peach twig borer, periodical cicada, plum curculio, fruit tree leaf roller, red banded leaf roller, Platynora flavandana, tarnished plant bug, tussock moth, Lecanium scale, San Jose scale and olive scale. For optimum scale control apply when crawlers are present. For lesser peach tree borer control spray limbs and trunk thoroughly weekly during moth flight. Use 1/2 pound for eastern tent caterpillar, codling moth, orange tortrix and tussock moth.

#### DO NOT APPLY WITHIN 1 DAY OF HARVEST OF PEACHES

#### DO NOT APPLY WITHIN 3 DAYS OF HARVEST OF APRICOTS AND NECTARINES

##### PLUMS, PRUNES AND CHERRIES

Use 1 1/4 pounds for black cherry aphid, mealy plum aphid, cherry fruit fly, cherry fruitworm, eye-spotted bud moth, fruit tree leaf roller, red banded leaf roller, Japanese beetle, lesser peach tree borer, peach twig borer, plum curculio, prune leaf roller, brown soft scale, Forbes scale, Lecanium scales, oystershell scale and San Jose scale. For optimum scale control apply when crawlers are present. For lesser peach tree borer control spray limbs and trunk thoroughly weekly during moth flight. Use 1/2 pound for eastern tent caterpillar, codling moth, orange tortrix and tussock moth.

#### DO NOT APPLY WITHIN 1 DAY OF HARVEST OF THESE CROPS

##### OLIVES

Use 1 to 1 1/4 pounds with 1-2 gallons of summer oil as spray for olive scale control. For optimum scale control apply when crawlers are present. A maximum of two applications is permitted.

##### SMALL FRUIT INSECT CONTROL

Recommended dosages refer to pounds of CARBARYL SPRAYABLE per acre and sufficient spray gallonage to obtain full coverage. Keep spray mixtures well agitated. Apply when insects or their damage appear. Repeat at 7 to 10 day intervals as necessary.

##### BLOOM-BERRIES

Use 1 1/2 to 2 1/2 pounds for blueberry, maggot, cherry and cranberry fruitworms, European fruit lecanium and Japanese beetle. Apply three weeks before harvest and repeat 10 days later or as necessary. A dilute spray of 125 to 150 gallons per acre is suggested.

##### CANEBERRIES

Use 1 1/2 to 3 1/4 pounds for cutworm, fireworm, fruitworm, Japanese beetle and leafhoppers. Apply in late bloom and as needed at 7 to 10 day intervals. A dilute spray of 300 gallons per acre is suggested.

#### DO NOT APPLY WITHIN 1 DAY OF HARVEST

##### GRAPES

Use 1 1/4 to 2 1/2 pounds for European fruit lecanium, grape vine borer, grape leafhoppers and grape leaf skeletonizer. Apply just before first brood leaf folder larvae emerge from rolls and as needed for leafhoppers. Use 2 1/2 pounds for grape berry moth, Japanese beetle, June beetles and red banded leaf roller. A dilute spray of 200 gallons per acre is suggested.

##### STRAWBERRIES

Use 1 1/4 to 2 1/2 pounds for sawfly, cutworm, strawberry leaf roller and strawberry weevils. A dilute spray of 100 to 200 gallons per acre is suggested.

#### DO NOT APPLY WITHIN 1 DAY OF HARVEST

##### BLACKBERRIES, RUGBY BERRIES, EVERGREENS, LOGANBERRIES AND RASPBERRIES

Use 2 1/2 pounds for Japanese beetle, leaf roller, leafhopper and raspberry aphid. A dilute spray of 100 to 200 gallons per acre is suggested.

#### DO NOT APPLY WITHIN 7 DAYS OF HARVEST FOR THESE CROPS



Manufactured for  
**ACETO CHEMICAL CO., INC.**  
AGRICULTURAL CHEMICALS DIV

126-02 NORTHERN BOULEVARD, FLUSHING, N.Y. 11368