

Reg # 51036-151

PM-19

File
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United States Environmental Protection Agency
Washington, D.C. 20460

OCT 1 1993

Office of
Prevention, Pesticides and
Toxic Substances

Morris Gaskins
MICRO-FLO CO.
BOX 5948
LAKELAND FL 33807

Subject: Label Amendment Submission of 06/02/93
in Compliance with WPS Labeling Requirements
EPA Reg No. 51036-151
CARBARYL SPRAYABLE

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is accepted subject to the comments listed below.

Based on your certification, the Agency has accepted only those changes to your labeling which are necessary to comply with PR Notices 93-7 and 93-11, which reflect the WPS labeling requirements of 40 CFR part 156, subpart K. Any other labeling changes submitted in connection with this amendment application and not directly related to compliance with PR Notice 93-7 or 93-11 have neither been reviewed nor accepted by the Agency. If you wish to make any such changes, you must submit a separate amendment application proposing them. If your product registration is currently suspended, acceptance of this labeling amendment does not affect the suspension in any way.

A copy of your proposed labeling stamped "Accepted with comments" is attached. Make any required changes described in the attached and send three copies of final labeling as soon as it is available to:

Document Processing Desk (FIN-LABEL)

2920

Office of Pesticide Programs (H-7504C)
U.S. Environmental Protection Agency
401 M Street SW
Washington, DC 20460-0001

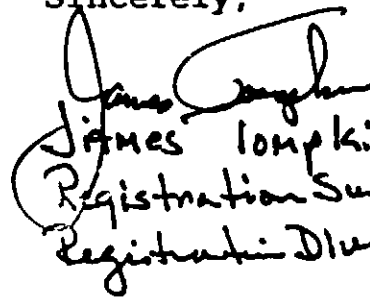
Hand or courier deliveries of final labels may be made to:

Document Processing Desk (FIN-LABEL)
Room 266A Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Please correct the typographical errors circled on the draft before printing final labeling.

In your final labeling the "Agricultural Use Requirements" text must be contained in a clearly separate box. This box may be set apart by a line, by another graphical device, by a different color background, or in any other way that clearly distinguishes it from surrounding text.

Sincerely,


James Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7504C)

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MICRO-FLO CO.
CARBARYL SPRAYABLE
51036-151 06/02/93
Original Submission

User Safety Recommendations must either be placed in a box or printed on the label in a contrasting color from surrounding text.

The Agricultural Use Requirements section must either be placed in a box or printed on the label in a contrasting color from the surrounding text.

There is a typographical error(s) in the User Safety Recommendations section.

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ACCEPTED
with COMMENTS
in EPA Letter Dated

OCT 1 1993

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

51036-151

Draft labeling for WPS language in response to PR 93-7

MICRO FLO

**CARBARYL SPRAYABLE
N-METHYL CARBAMATE**

A wettable powder for control of insect pests on Cotton, Vegetable, Fruit, Forage and Field Crops, Tobacco, Citrus, Nuts and insects on ornamentals, in and around buildings, in forests and infestation of mosquitoes.

ACTIVE INGREDIENT:

Carbaryl (1-naphthyl methylcarbamate)	80.00%
INERT INGREDIENTS.....	20.00%
TOTAL	100.00%

KEEP OUT OF REACH OF CHILDREN

WARNING AVISO

Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalles. (If you do not understand this label, find someone to explain it to you in detail.)

**STATEMENT OF PRACTICAL TREATMENT
N-Methyl Carbamate**

- IF ON SKIN: Wash thoroughly with soap and water.
 - IF IN EYES: Flush with plenty of water.
 - IF INHALED: Remove to fresh air.
 - IF SWALLOWED: Drink one or two glasses of water and induce vomiting by touching back of throat with fingers. Do not induce vomiting or give anything by mouth to an unconscious person.
- This product is an N-methyl carbamate acid ester that inhibits cholinesterase.

See Elsewhere on Label For Additional Precautionary Statements

EPA Reg. No. 51036-151

EPA Est. No. 51036-GA-1

Manufactured By
MICRO FLO COMPANY
P.O. BOX 5948
LAKELAND, FLORIDA 33807

**PRECAUTIONARY STATEMENTS
Hazards To Humans And Domestic Animals**

WARNING

May be fatal if swallowed. Avoid breathing vapors (dust or spray mist). Avoid contact with eyes, skin or clothing.

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

Do not use this product in commercial food areas of food handling establishments, restaurants, or other places where food is prepared or processed.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

1. Coveralls over short-sleeved shirt and short pants
2. Waterproof gloves
3. Chemical-resistant footwear plus socks
4. Protective eyewear
5. Chemical-resistant headgear for overhead exposure
6. Chemical resistant apron when cleaning equipment, mixing, or loading

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMENDATIONS

Users should:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing

ENVIRONMENTAL HAZARDS

BEE CAUTION: 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 areas. This product is extremely toxic to aquatic and estuarine invertebrates. Do not apply directly to water and wetland, except under the forest canopy and 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.

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.

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 and restricted-entry intervals. 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:

1. Coveralls over short-sleeved shirt and short pants
2. Waterproof gloves
3. Chemical-resistant footwear plus socks
4. Protective eyewear
5. Chemical-resistant headgear for overhead exposure

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Store in a dry place. In case of minor spills, follow all precautions indicated above and cleanup immediately. Sweep up and dispose of wastes.

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.

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 on 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.

CHEMIGATION PROHIBITION

DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM.

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 2 days.
2. Does not control spider mites but is compatible with common miticides.
3. Subsequent planting of food and feed crops in treated soil must be made with crops on this or other carbaryl label(s).

Carbaryl Sprayable is a dry powder for dispersion in water and application as an insecticidal spray in hydraulic sprayers, mist blowers, low-gallonage ground equipment and airplanes.

READ GENERAL DIRECTIONS AND CAUTIONS. READ SPECIFIC DIRECTIONS FOR INDIVIDUAL CROPS. USE IN STRICT ACCORDANCE WITH LABEL DIRECTIONS AND CAUTIONS.

SPECIAL DIRECTIONS FOR PREPARING LOW-GALLONAGE SPRAYS

IN LOW-GALLONAGE GROUND EQUIPMENT: Use 50-mesh or coarser in entire system; nozzles should be cone type, number 3 or larger. Use clean equipment. Put about 3/4 of the required water volume in the spray tank. Close off booms. Start pump and maintain moderate by-pass agitation while slowly adding the proper amount of Carbaryl Sprayable. Add remaining water and continue to recirculate until suspension is uniform; 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 mixture or storage tank, follow above directions. 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 tank 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 MIXTURE 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 with some phosphate pesticides may cause foliar injury.

DOSAGE-ACREAGE CONVERSION TABLE

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

RATE PER ACRE CARBARYL SPRAYABLE	10-POUND BAG TREATS
2/3 pound	16 acres
1 pound	10 acres
1 1/4 pound	8 acres

1 7/8 pound
 2 1/2 pound
 3 1/8 pound

5 1/3 acres
 4 acres
 3 1/5 acres

COTTON INSECT CONTROL

Recommended dosages refer to pounds Carbaryl Sprayable per acre. Use at least 3 gallons of mixed spray per acre and increase to higher gallonage on larger plants. For improved bollworm control, substitute blackstrap molasses (feed grade) for part of the water in the mixed spray. Use 1 gallon of molasses per acre. To avoid straining lint, do not use molasses after bolls open.

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

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 irrigated cotton. Applications should be made every 5 to 7 days as long as control is necessary.

Use 1 7/8 to 3 1/8 pounds for pink bollworm on a 5 to 7 day schedule depending on the size of the cotton and degree of infestation. Do not apply within 7 days of harvest.

FORAGE AND FIELD CROP INSECT CONTROL

Recommended dosages refer to pounds Carbaryl Sprayable per acre. Use sufficient spray gallonage 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 mixtures 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 SOYBEANS

Use 2/3 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 beetle, leafhoppers, three-cornered alfalfa hopper, thrips and velvet bean caterpillar. Use 1 1/4 to 1 7/8 pounds 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 ALFALFA and CLOVERS, use 1 7/8 pounds for cutworm control.

On COWPEAS only, use 2 1/2 pounds for cowpea curculio. Apply 4 applications beginning at first bloom and at 5 day intervals thereafter. Do not apply within 3 days of harvest of alfalfa and cowpeas.

On CLOVERS in Texas use 2 pounds for clover head weevils. To avoid possible injury on tender foliage, do not apply when foliage is wet or when rain or excessive humidity is expected during the next 2 days.

WARNING: Do not apply 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 propanil (such as "Stam" F-34 or "Rogue") has been or will be applied.

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 propanil (such as "Stam" F-34 or "Rogue").

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.

SORGHUM (including MILO and GRAIN SORGHUM)

Use 1 1/4 to 2 1/2 pounds for cutworm control. 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 pounds rate is suggested for nymphs on small plants or sparse vegetation in wasteland, rangeland, ditchbanks 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 tablespoonfuls 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 as plant injury may result. For budworms, 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 bud as injury may result.

Treated fields may be entered immediately after foliage has dried. If late applications are necessary, allow 3 days before priming or cutting.

VEGETABLE INSECT CONTROL

Suggested dosages refer to pounds Carbaryl Sprayable per acre. Where a dosage range is indicated, use lower rate on young plants; higher rate on mature plants. Use 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 or as necessary unless shorter intervals 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 beetle, sap beetles and leafhoppers. For larvae in whorl (budworm damage) and foliage feeders, apply to entire plant. Repeat as necessary. For insect attacking silks and ears, apply at 2 to 3 day intervals starting when first silks appear and continuing until silks begin to dry. Three or more applications may be required depending on severity of infestation. Timing and good coverage are absolutely essential for effective control. Use 2 1/2 pounds in at least 15 gallons of water for cutworm control. Spray in 12 inch band over the corn row. Use proportionate amounts for narrower bands or broadcast.

Application of Carbaryl Sprayable to the tassel region of corn during the pollen shed period will seriously reduce bee

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populations.

BEANS (Green beans, lima beans, snap beans, cowpeas and black-eyed peas)

Use 2/3 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, cutworms, corn earworm, stink bugs and tarnished plant bug.

IN CALIFORNIA use 2 1/2 pounds for corn earworm, lima bean and 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 post harvest period. Do not apply more often than once every 3 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 2/3 to 1 1/4 pounds for flea beetles, harlequin bug and leafhoppers.

To control six-spotted leafhoppers (aster yellows 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 earworm, 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.

Do not apply within 3 days of harvest of head lettuce, garden beets (roots), horseradish, radishes, parsnips, rutabagas, salsify (roots), and turnips (roots). Do not apply within 14 days of harvest of Chinese cabbage, collards, dandelion, endive (escarole), garden beets (tops), kale, leaf lettuce, mustard greens, parsley, salsify (tops), spinach, Swiss chard and turnips (tops). No time limitation on carrots.

CUCUMBER, MELONS, PUMPKIN, SQUASH

Use 2/3 to 1 1/4 pounds for pickleworm and melonworms; 1 1/4 pounds for cucumber beetles, flea beetles, leafhoppers and squash 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 2 days. Carbaryl injures watermelons 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.

Use 3 pounds for alfalfa looper in State of Washington only. Repeat as necessary.

POTATO, TOMATO, EGGPLANT AND PEPPER

Use 2/3 and 1 1/4 pounds for Colorado potato beetle, flea beetles and leafhoppers.

Use 1 1/4 to 2 1/2 pounds for European corn borer, fall armyworm, lace bugs, tomato fruitworm, tomato hornworm, tarnished plant bugs and stink bugs.

Use 2 1/2 pounds for cutworm control on potato, tomato and eggplant.

OKRA

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 2/3 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. Do not apply within 3 days of harvest of these crops.

SMALL FRUIT INSECT CONTROL

Recommended dosages refer to pounds of Carbaryl Sprayable per acre. Use 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 or as necessary.

BLUEBERRIES

Use 1 7/8 to 2 1/2 pounds for blueberry maggot, cherry and cranberry fruitworms, European fruit lecanium and Japanese beetle. Apply 3 weeks before harvest and repeat 10 days later or as necessary. A dilute spray of 125 to 150 gallons per acre is suggested.

CRANBERRIES

Use 1 7/8 to 3 3/4 pounds for cutworms, fireworms, fruitworms, 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 leaf folder, grape leafhoppers, and grape leaf skeletonizer. Apply just before first brook 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 redbanded leaf roller. A dilute spray of 200 gallons per acre is suggested.

STRAWBERRIES

Use 1 1/4 to 2 1/2 pounds for meadow spittlebug, strawberry leaf roller and strawberry weevil. A dilute spray of 100 to 200 gallons per acre is suggested. Do not apply within 1 day of harvest.

BLACKBERRIES, BOYSENBERRIES, DEWBERRIES, LOGANBERRIES, RASPBERRIES
Use 2 1/2 pounds for Japanese beetle, leaf rollers, leafhoppers and raspberry aphid. A dilute spray of 100 to 200 gallons per acre is suggested. Do not apply within 7 days of harvest of these crops.

TREE FRUIT INSECT CONTROL

Recommended dosages refer to pounds of Carbaryl Sprayable per 100 gallons dilute spray. Keep spray mixtures well agitated. Apply for full coverage in normal spray schedules or when insects or their damage appear. Repeat to your State recommendations.

APPLE 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 blister mite, pear rust mite, eye-spotted bud moth, green fruitworm, Lygus bugs, 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. Foliar injury may result from combination with summer oils. Do not apply within one day of harvest of apples and pears.

East of the Rocky Mountains: Use 2/3 pound for apple mealbug, 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-spotted bug moth, fruit tree leaf roller, green fruitworm, Japanese beetle, pear psylla,

periodical cicada, plum curculio, red banded leaf roller, rosy apple aphid, woolly apple aphid, apple rust mite, pear leaf blister mite, pear rust mite, tarnished plant bug, tentiform leaf miners, Forbes scale, lecanium scale, oystershell scale, and San Jose scale. For optimum scale control, apply when crawlers are present. To control rosy 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 foliar injury if used before second cover on York and McIntosh apples. Do not apply within 1 day of harvest of apples and 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 set, 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 Sprayable per 100 gallons dilute spray.

CONCENTRATION: Use 1/3 to 2/3 pound on easily-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 and 25 days after full bloom.

VARIETAL RESPONSE: Easily-thinned varieties include Cortland, Grimes, Jonathan, McIntosh, Orleans, Rome Beauty, Puritan, Red Delicious, Winesap, and Yellow Newton. Difficult-to-thin varieties include Baldwin, Ben Davis, Dutchess, Early McIntosh, Golden Delicious, Lady Apple, Northern Spy, Rhode Island Greening, Yellow Transparent and York Imperial.

PEACHES, APRICOTS AND NECTARINES

Use 1 1/4 pound for codling moth, cucumber beetles, European earwig, Japanese beetle, Pandemix Moth, June beetles, lesser peach tree borer, orange tortrix, oriental fruit moth, peach twig borer, periodical cicada, plum curculio, fruit tree leaf roller, red-banded leaf roller, Platynota flavendana, tarnished plant bug, tussock moth, lecanium scale, San Jose scale and olive scale. For optimum scale control, spray limbs and trunk thoroughly, weekly during moth flight. 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 leafhopper, 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 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 1/2 gallons of summer oil, in sprays for olive scale control. For optimum scale control, apply when crawlers are present. A maximum of 2 applications is permitted.

CITRUS INSECT CONTROL

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

GRAPEFRUIT, LEMONS, LIES, ORANGES, TANGELOS, TANGERINES, CITRUS, CITRON, KUMQUATS, AND HYBRIDS OF THESE

Use 1 1/4 pounds for California orange dog, citrus worm, 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, citrus snow scale and yellow scale. Apply lower dosage early in the season or against light infestation and the higher dosage late in the season or against heavy infestation and situations involving infested fruit. May be used with petroleum oil as used in common practice on citrus. Do not apply within 5 days of harvest of these crops.

POULTRY INSECT CONTROL CHICKENS, TURKEYS, DUCKS, GEESE, GAME BIRDS AND PIGEONS - DIRECT MIST SPRAY ON BIRDS:

Control northern fowl mite, chicken mite, lice and fleas by: 1. Misting with Electric Fog Machine: Mix 6 ounces of Carbaryl Sprayable 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, or 2. Spraying with knapsack or Cylinder Type Compressed Air Sprayers: Mix 4 ounces of 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 necessary. 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 CONTROL

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

ALMOND

Use 1 1/4 pounds for peach twig borer, San Jose scale and fruit tree roller. Apply in "popcorn" or petal fall stages and again when the May brook of the peach twig borer begins to hatch or thereafter as needed. Do not apply within 28 days of harvest.

FILBERT

Use 1 1/4 pounds for filbert aphid, filbert leaf roller 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.

WALNUT

Use 2/3 pound for codling moth, frosted scale, European fruit lecanium scale, calico scale, filbertworm and fruit tree leaf roller. Spray 1000 gallons per acre for complete coverage. In concentrated sprays use 6 pounds in at least 200 gallons per acre. For codling moth apply 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 earwig. Spray tree trunks to point of run-off.

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: chinch, leafhoppers, sod webworms, fall armyworms, cutworms, earwigs, fleas, mosquitoes, millipedes, lawn moths, ants

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.

FOREST INSECT CONTROL

Recommended dosages refer to pounds of Carbaryl Sprayable to the applied per acre by aircraft. Keep spray mixtures well agitated. Addition of 4 ounces of sticker per gallon of spray improves

residual control of cankerworm 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 early instars and leaves are 1/3 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 3 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 fuel oil to make 1 gallon. Apply at the rate of 1 gallon per acre. Apply when most larvae are in first 3 instars.

PEACH, MAPLES AND OTHER NORTHERN HARDWOODS

For control of the Saddled Prominent in Northeastern United States, use 1 1/4 pounds in water to make 1 gallon. Apply at the rate of 1 gallon per acre. Apply when larvae are in early instars.

ADULT MOSQUITOES

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

Use 1/3 to 2/3 pound per acre in mist blower, 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 area to be treated. For optimum control apply in early 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 tablespoonfuls per gallon in hand sprayers for treating backyards or other limited areas. Thoroughly cover lower shade tree foliage, shrubbery, flower beds, grass and shaded areas around buildings where adult mosquitoes congregate. Repeat at 7 to 10 day intervals or as necessary. Carbaryl injures Boston Ivy.

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

PEST CONTROL IN AND AROUND BUILDINGS (For Use by Pest Control Operators Only)

IN AND AROUND HOMES, APARTMENTS, HOTELS, RESTAURANTS, INSTITUTIONS, FOOD-HANDLING PLANTS, FARM BARNs, MUNICIPAL AND RECREATION AREAS -
For cockroaches and ants, use a 2.5% suspension. For brown dog ticks, earwigs, and millipedes, use a 1.0% suspension (see Mixing

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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 in 3 to 6 months or when necessary.

MIXING DIRECTIONS

Gallons of Water Spray Desired	Amount of Carbaryl Sprayable Needed to Make	
	1.0% Suspension	2.5% Suspension
3	5 ounces	12 ounces
5	8 ounces	1-1/4 pounds
10	1 pound	2-1/2 pounds

NOTE: Do not use this product in commercial food areas of food handling establishments, restaurants, or other places where food is prepared or processed.

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.

ORNAMENTAL INSECT CONTROL

Use 1 1/4 pounds per gallon of water (1 1/4 tablespoonfuls per gallon) when insects or their damage appear. Repeat weekly or as needed. Carbaryl injures Boston Ivy. Use on herbaceous and annual plants (carnation, gladioli, zinnia, chrysanthemum, etc.) to control:

blister beetle	June beetle	mealybug
flea beetle	lace bug	thrips (exposed)
boxelder bug	plant bug	psylid
Japanese beetle	leaf roller	rose aphid

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Use on shrubs, trees and woody plants (rose, lilac, arbor vitae, juniper, hydrangea, azalea, elm, maple, oak, dogwood, birch, pine, etc.) to control:

- | | | |
|-------------------|-------------------|--------------------|
| apple aphid | June beetle | plant bug |
| bagworm | lace bug | puss caterpillar |
| birch leaf miner | leafhopper | rose aphid |
| boxelder bug | leaf roller | rose-slug |
| boxwood leafminer | mealybug | scale insects |
| elm leaf aphid | mimosa webworm | tent caterpillar |
| elm leaf beetle | oak leaf miner | thorn burg |
| gypsy moth | orange tortrix | thrips (exposed) |
| Japanese beetle | periodical cicada | willow leaf beetle |

CONDITIONS OF SALE

All statements concerning the use of this product apply only when used as directed.

THE MANUFACTURER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, CONCERNING THIS PRODUCT OR ITS USE, WHICH EXTEND BEYOND THE DESCRIPTION ON THE LABEL.

Read all directions carefully.