

PM 04

19713-50

09/27/99

1/6



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

Luz G. Piwonka  
Drexel Chemical Company  
P.O. Box 13327  
1700 Channel Avenue  
Memphis, TN 38113-0327

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

SEP 27 1999

Subject: Drexel Carbaryl 80S  
EPA Registration No. 19713-50  
Amendment to delete unsupported uses and revise label as  
per GDE instructions dated August 6, 1999.  
Amendment dated September 7, 1999.

Dear Ms. Piwonka:

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

1. On page 3<sup>i</sup> of the label the PHI for the crop Potato must be changed from 3 days to 7 days.

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

Sincerely,

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

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

Approved  
with certain limitations  
by EPA Labeling System

SEP 27 1999

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
19713-50

-pending-



# Carbaryl 80S

A Wettable Powder for Control of Insect Pests

**ACTIVE INGREDIENT:**

Carbaryl (1-Naphthyl N-methylcarbamate) . . . 80.0%

**OTHER INGREDIENTS:** . . . . . 20.0%

**TOTAL:** . . . . . 100.0%

**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 detalle. (If you do not understand the label, find someone to explain it to you in detail).

See **FIRST AID** Below

EPA Reg. No. 19713-50

EPA Est. No. 19713-GA-1

Net Contents: \_\_\_\_\_

### FIRST AID

**IF SWALLOWED:** Induce vomiting by placing finger on back of throat. Call a physician. Do not induce vomiting or give anything by mouth to an unconscious person.

**IF ON SKIN:** Wash skin with soap and plenty of water. If irritation develops get medical attention.

**IF IN EYES:** Immediately flush eyes with plenty of water. If irritation develops get medical attention.

**NOTE TO PHYSICIAN:** Carbaryl is a moderate, reversible, cholinesterase inhibitor. Atropine is antidotal. DO NOT use 2-PAM, opiates or cholinesterase inhibiting drugs. Carbaryl is an N-Methyl Carbamate Insecticide.

### PRECAUTIONARY STATEMENTS

**Hazards to Humans and Domestic Animals**

**WARNING:** May be fatal if swallowed. Avoid breathing vapors. Avoid contact with eyes, skin or clothing. Do not use this product in commercial food areas or food handling establishments, restaurants or other places where food is prepared or processed.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: Long-sleeved shirt and long pants, waterproof gloves, shoes plus socks and dust/mist filtering respirator (MSHA/NIOSH approval prefix number TC-21C) or a NIOSH approved respirator with any R, P or HE filter. 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/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

Users should: 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. 3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS

This product is extremely toxic to aquatic and estuarine invertebrates. For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark, except under the forest canopy and 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.

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.

#### APPLICATION PROCEDURES

**CARBARYL 80S** is a dry powder for dispersion in water and application as an insecticidal spray in hydraulic sprayers, mist blowers, low gallonage, ground equipment and aircraft.

USE IN STRICT ACCORDANCE WITH LABEL DIRECTIONS AND PRECAUTIONS.

#### Special Directions for Preparing Low Gallonage Spray in Low Gallonage Ground Equipment:

Use 50-mesh or coarser screens 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 this product. 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 Aircraft Application:** For preparing spray in mixing or storage tank, follow above directions. To maintain uniform suspension, recirculate at intervals and before pumping into aircraft tank. For best results, use clean equipment and apply at least 1 gallon per acre of the prepared spray. After spraying, flush tanks and lines with clear water.

**Combination spray mixtures in low gallonage equipment and aircraft:** Physical compatibility of this product with other pesticides in low gallonage mixtures is not fully known. Before preparing large amounts, combinations should be tested by fully dispersing this product, 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 this product with some phosphate pesticides may cause foliar injury.

#### COMPATIBILITY

1. This product has been effectively used without plant injury with most common insecticides, miticides, fungicides, nutrients, adjuvants and with petroleum oil as used on Citrus.
2. Compatibility can be affected by water in your locality, various surfactants and other formulation ingredients. Possible plant injury may occur under adverse conditions such as high humidity, drought, improper fertilization, etc.
3. Do not mix this product with nutrients, adjuvants and other pesticides unless your experience indicates that the mixture is effective and will not result in plant injury. If uncertain, prepare a small amount of the mixture and test on a representative portion of the crop.
4. Unstable under highly alkaline conditions. Not effective if used with alkaline materials such as Bordeaux, lime, lime sulfur and casein-lime spreaders.

#### GENERAL PRECAUTIONS

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 most common miticides.



Manufactured By:  
**Drexel Chemical Company**

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

**SINCE 1972**

**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 this product's residues when it 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.

If this insecticide is used in accordance with label directions, forage and feed crops, including Almond hulls, Bean vines, Carrot tops, Citrus pulp, Cotton forage, Cowpea hay, Peanut hay, Pea vines, Rice 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**

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, greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval (REI) and notification to workers. 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 of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, waterproof gloves and shoes plus socks.

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

**IMPORTANT:** The directions on this label are based on tests and field experience relating to (a) effectiveness; and (b) possible injury to plants and animals; and (c) residues in food, feed, meat and milk. Follow directions for most effective use.

**FORAGE, FIELD AND VEGETABLE CROP CONTROL**

Recommended dosages refer to pounds of this product per acre. Where a dosage range is indicated, use lower rate on young plants, higher rates on mature plants. Use sufficient spray gallonage to obtain full coverage. This will usually vary from 3 to 40 gallons per acre depending on equipment, degree of insect infestation and stage of crop growth. Keep spray mixtures well agitated. Apply when insect or their damage appears and repeat at 7 to 14 day intervals or as necessary unless shorter intervals are specified below. See specific directions below for Grasshopper control.

**ALFALFA, CLOVERS** — Use 3/8 to 1 1/4 pounds for Blister beetles and Mexican bean beetles. Use 1 1/4 pounds for Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Green cloverworms, Japanese beetles, Leafhoppers, Three cornered alfalfa hoppers, Thrips and Velvetbean caterpillars. Use 1 1/4 to 1 3/4 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. Use 1 1/4 pounds for Cutworm control. On clovers in TX 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.

**ALFALFA** — Allow a 7 day pre-harvest interval.

**CLOVER** — Allow a 7 day pre-harvest interval.

**ASPARAGUS** — Use 1 1/4 to 2 1/2 pounds for Asparagus beetles on seedlings or spears. Use 2 1/2 to 5 pounds for Asparagus beetles and Apache cicadas on ferns or brush growth in the post-harvest period. Do not apply more often than once every 3 days. Allow a 1 day pre-harvest interval.

**BEANS (such as Dry beans, Green beans, Lima beans, Navy beans, Snap beans and Southern peas including Crowder and Black-eyed peas)** — Use 3/8 pound for Mexican bean beetles, 1 1/4 pounds for Bean leaf beetles, Cucumber beetles, Flea beetles, Japanese beetles, Leafhoppers, Velvetbean caterpillars and Western bean cutworms. Use 1 1/4 to 1 3/4 pounds for Armyworms, Cutworms, Corn earworms, Stink bugs and Tarnished plant bugs. In CA, use 2 1/2 pounds for Corn earworms, Limabean pod borers, Lygus and Stink bugs. Do not harvest within 14 days of grazing or harvest for forage or within 3 days of harvest of fresh Beans or Peas or within 21 days of harvest of Dried beans or Peas, Seed or Hay.

**CABBAGE, BROCCOLI, BRUSSELS SPROUTS, CAULIFLOWER, KOHLRABI** — Use 3/8 to 1 1/4 pounds for Flea beetles and Harlequin bugs. Use 1 1/4 to 2 1/2 pounds for Armyworms, Imported cabbageworms and Corn earworms. Allow a 3 day pre-harvest interval.

**CHINESE CABBAGE, COLLARDS, HANOVER SALAD, HORSE RADISH, KALE, MUSTARD GREENS, RADISHES, RUTABAGAS, TURNIPS** — Use 3/8 to 1 1/4 pounds for the Flea beetles, Harlequin bugs and Leafhoppers. Use 1 1/4 to 1 3/4 pounds in a 5 to 7 day schedule for Aster leafhoppers. Use 1 1/4 to 2 1/2 pounds for Armyworms, Imported cabbageworms, Corn earworms, Tarnished plant bugs and Stink bugs. Allow a 7 day pre-harvest interval for Horseradish, Radishes, Rutabagas and Turnips (roots). Allow a 14 day pre-harvest interval for Chinese cabbage, Collards, Hanover salad, Kale, Mustard greens and Turnips (tops).

**CARROTS, PARSNIPS, PARSLEY** — Use 3/8 to 1 1/4 pounds for Flea beetles and Leafhoppers. Use 1 1/4 to 1 3/4 pounds in a 5 to 7 day schedule for Aster leafhoppers. Use 1 1/4 to 2 1/2 pounds for Armyworms, Corn earworms, Tarnished plant bugs and Stink bugs. Allow a 7 day pre-harvest interval for Carrots and Parsnips. Allow a 14 day pre-harvest interval for Parsley.

**CORN (Field, Pop, Sweet)** — Use 1 1/4 to 2 1/2 pounds for Corn earworms, Corn rootworms (adults), European corn borers, Fall armyworms, Flea beetles, Japanese beetles, Sap beetles and Leafhoppers. For larvae in whorl (budworm damage) and foliage feeders, apply to entire plant. Repeat as necessary. For insects attacking silks and ears, apply at 1 to 6 day intervals starting when first silks appear and continuing until silks begin to dry. 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 to insure adequate stalk coverage. Use proportionate amounts for narrower bands or broadcast. Application of this product to the tassel region of Corn during the pollen shed period will seriously reduce bee population.

For Sweet corn do not apply within 2 days of harvest of ears, within 14 days of harvest or grazing of forage or within 48 days of harvest of fodder. For Field corn and Popcorn do not apply within 48 days of harvest of grain and fodder or within 14 days of harvest or grazing of forage or silage.

**COWPEAS** — Use 3/8 to 1 1/4 pounds for Blister beetles and Mexican bean beetles. Use 1 1/4 pounds for Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Flea beetles, Green cloverworms, Japanese beetles, Leafhoppers, Three-cornered alfalfa hoppers, Thrips and Velvetbean caterpillars.

Use 1 1/4 to 1 3/4 pounds for Armyworms, Corn earworms, Cutworms, Stink bugs and Webworms. Use 2 1/2 pounds for Cowpea curculios. Apply 4 applications beginning at first bloom and at 5 day intervals thereafter. In CA, use 2 1/2 pounds for Corn earworms, Lima bean pod borers, Lygus and Stink bugs. 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. Do not harvest within 14 days of grazing or harvest for forage or within 3 days of harvest of fresh Beans or Peas or within 21 days of harvest of dried Beans or Peas, Seed or Hay.

**CUCUMBER, MELONS, PUMPKIN, SQUASH** — Use 3/8 to 1 1/4 pounds for Pickleworms 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. Allow a 3 day pre-harvest interval.

**DANDELION, ENDIVE (Escarole), LETTUCE, SALSIFY** — Use 3/8 to 1 1/4 pounds for Flea beetles, Harlequin bugs and Leafhoppers. Use 1 1/4 to 1 3/4 pounds in a 5 to 7 day schedule for Aster leafhoppers. Use 1 1/4 to 2 1/2 pounds for Armyworms, Imported cabbageworms, Corn earworms, Tarnished plant bugs and Stink bugs. For optimum control of Corn earworms after Lettuce heads begin to form, use 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. Allow a 14 day pre-harvest interval for Dandelion, Endive, Head and Leaf lettuce. Allow a 7 day pre-harvest interval for Salsify root.

**FORAGE GRASSES, PASTURE** — Use 1 1/4 to 1 3/4 pounds for Armyworms and Thrips. For Thrips control in grasses grown for seed, high spray pressure may help penetration into boot. Use 2 to 2 1/2 pounds for White grubs (Green June beetles). Allow a 14 day pre-harvest interval.

**GARDEN BEET, SPINACH, SWISS CHARD** — Use 3/8 to 1 1/4 pounds for Flea beetles, Harlequin bugs and Leafhoppers. Use 1 1/4 to 2 1/2 pounds for Armyworms, Corn earworms, Tarnished plant bugs and Stink bugs.

Do not apply within 7 days of harvest-of Garden beets (roots). Allow a 14 day pre-harvest interval for Garden beets (tops), Spinach and Swiss chard.

**PEANUTS** — Use 3/8 to 1/4 pounds for Blister beetles and Mexican bean beetles. Use 1/4 pounds for Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Green cloverworms, Japanese beetles, Leafhoppers, Three-cornered alfalfa hoppers, Thrips and Velvetbean caterpillars. Use 1/4 to 1/2 pounds for Armyworms, Corn earworms, Stink bugs and Webworms. 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. Allow a 14 day pre-harvest interval.

**PEAS** — Use 1/4 pounds for Leafhoppers and Colorado potato beetles. Use 1/4 to 1/2 pounds for Armyworms. Use 3 pounds for Alfalfa loopers in WA State only. Repeat as necessary.

Do not harvest within 14 days of grazing or harvest for forage or within 3 days of harvest of fresh Peas or within 21 days of harvest of dried Peas, Seed or Hay.

**POTATO, TOMATO, EGGPLANT, PEPPER** — Use 3/8 to 1/4 pounds for Colorado potato beetles, Flea beetles and Leafhoppers. Use 1/4 to 2/5 pounds for European corn borers, Fall armyworms, Lacebugs, Tomato fruitworms, Tomato hornworms, Tarnished plant bugs and Stink bugs on Potato, Tomato and Eggplant. Use 2 1/2 pounds for Cutworm control. Allow a 3 day pre-harvest interval.

**RICE** — In the MS Delta and TX use 1/4 to 1/2 pounds for Armyworms and Stink bugs. In CA use 2 1/2 pounds for Armyworms, Leafhoppers and Tadpole shrimp. For optimum Tadpole shrimp control apply to the water when the pest first appears.

Do not use on Rice fields in which crayfish and/or catfish farming is included in the cultural practice.

Allow a 14 day pre-harvest interval for Grain or Straw.

**IMPORTANT:** To avoid injury to Rice, do not apply propanil (such as "STAN F-34" or "ROGUE") within 15 days before or after this product is applied. Allow a 14 day pre-harvest interval.

**SORGHUMS (such as grain sorghum)** — Use 1/4 to 2 1/2 pounds for Armyworms, Corn earworms, Stink bugs and Webworms. Use 1 1/2 pounds for Sorghum midge. Use 2 1/2 pounds for Cutworms. 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 or Fodder. Allow a 14 day pre-harvest interval for grazing of Forage or Silage.

**Soybeans** — For light to moderate populations in Southeastern States only, use 3/8 pound for Bean leaf beetles, Cucumber beetles, Green cloverworms, Mexican bean beetles and Velvetbean caterpillars. Use 3/8 to 1 pound for Corn earworms.

For clean up of existing populations: Use 3/8 to 1/4 pounds for Blister beetles and Mexican bean beetles. Use 1/4 pounds for Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Green cloverworms, Japanese beetles, Leafhoppers, Three-cornered alfalfa hoppers, Thrips and Velvetbean caterpillars. Use 1/4 to 1 1/2 pounds for Armyworms, Corn earworms, Webworms and Stink bugs.

Do not harvest within 14 days of grazing or harvest for forage or within 3 days of harvest of fresh Beans or Peas or within 21 days of harvest of dried Beans or Peas, Seed or Hay.

**IMPORTANT:** Do not apply a combination of this product and 2,4-DB herbicide (such as "BUTYRAC" 175 or "BUTOXONE" SB) to Soybeans.

**SUGAR BEETS** — Use 1/4 to 2 1/2 pounds for Armyworms, Flea beetles, Leafhoppers and Webworms. Allow a 28 day pre-harvest interval for roots and forage.

**TOBACCO**

**In Plant Beds:** For Tobacco flea beetles — Use 2 1/2 level tablespoons per gallon or 1/4 gallons per 50 gallons and apply 6 gallons per 100 square yards. For Green June beetle grubs — Use 3/8 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 yard. May be applied before or after seeding. Avoid excessive application as plant injury may result.

**In Fields:** For Budworms, Flea beetles, Japanese beetles, June beetles and Hornworms — Use 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 bud of plant as injury may result. Treated fields may be entered immediately after foliage has dried. If late applications are necessary, allow 3 days before pruning or cutting.

**GRASSHOPPERS** — Apply 3/8 to 1 1/2 pounds as often as necessary to control Grasshoppers on the above forage, field and vegetable crops. Follow pre-harvest and grazing use limitations listed for each of the above crops. A 3/8 to 1 1/4 pounds rate is suggested for Nymphs on small plants or sparse vegetation in wasteland, rangeland, ditchbanks and borders. A 1/4 to 2 1/2 pounds dosage should be used when Grasshoppers are mature or material is applied to crops requiring greater coverage.

**TREE FRUIT AND NUT INSECT CONTROL**

Recommended dosages refer to pounds of this product per 100 gallons of dilute spray in conventional hydraulic-type sprayers. Apply dilute sprays for full coverage. Spray gallonage will vary according to tree size, density, planting distance and stage of growth. With concentrate and aerial sprays, where lower volumes of spray are applied per acre, the concentration of this

product should be increased in the spray mixture so that the amount of this product applied per acre is equivalent to a full coverage dilute spray. Keep spray mixtures well agitated.

**ALMONDS** — Use 1/4 pounds for Fruittree leafrollers, Peach twig borers and San Jose scales. Apply in "popcorn" or petal fall stages and again when the May brood of the Peach twig borers begins to hatch or thereafter as needed. Allow a 14 day pre-harvest interval.

**APPLES, PEARS** — Application of this product within 30 days after full bloom may provide Apple thinning, to avoid this, delay use until at least 30 days after bloom. Foliar injury may result from combination with Summer oils West of the Rocky Mountains or when used before second cover on York and McIntosh apples East of the Rocky Mountains. Allow a 3 day pre-harvest interval.

**West of the Rocky Mountains:** Use 1 to 1 1/4 pounds for Apple aphids, Apple rust mites, Apple suckers, Bagworms, California pearslugs (Pear sawflies), Codling moths, Eyespotted bud moths, Green fruit worms, Lecanium scales, Lygus bugs, Orange tortrix, Oystershell scales, Pearleaf blister mites, Pear psylla, Pear rust mites, San Jose scales, Tentiform leafminers and Woolly apple aphids. For optimum scale control apply when crawlers are present. When heavy Aphid infestations are present, repeated applications may be necessary for optimum control.

**East of the Rocky Mountains:** Use 3/8 pound for Apple aphids, Apple mealybugs, Codling moths and White apple leafhoppers. When heavy aphid infestations are present, repeated applications may be necessary for optimum control.

Use 1/4 pounds for Apple maggots, Bagworms, Eastern tent caterpillars, European apple sawflies, Eyespotted bud moths, Fruit tree leafrollers, Green fruitworms, Japanese beetles, Pear psylla, Periodical cicadas, Plum curculios, Redbanded leafrollers, Rosy apple aphids, Woolly apple aphids, Apple rust mites, Pearleaf blister mites, Pear rust mites, Tarnished plant bugs, Tentiform leafminers, Forbes scales, Lecanium scales, Oystershell scales and San Jose scales. For optimum scale control, apply when crawlers are present. To control Rosy apple aphids, apply before leaves are curled. Allow a 3 day pre-harvest interval for Apples and Pears.

**Apple Thinning** — Many factors influence the degree of Apple thinning obtained with this product. These include tree age, variety, 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 this product so that excessive thinning and possible yield reduction will not occur. Recommended dosages refer to pounds of this product per 100 gallons dilute spray.

**Concentration:** Use 3/8 to 3/4 pound on easily-thinned varieties. Apply for full coverage. On hard-to-thin varieties, use 3/8 to 1 1/4 pound.

**Timing:** Apply in one spray timed between 10 to 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, Steele red, Turley, Wealthy, Yellow transparent and York imperial.

**CITRUS FRUITS (such as Citrus Citron, Grapefruit, Hybrids, Kumquats, Lemons, Limes, Oranges, Tangelos and Tangerines)** — Use 1/4 pounds for California orange dogs, Citrus cutworms, Fruittree leafrollers, Orange tortrix and Western tussock moths.

Use 1 to 1 1/4 pounds for Black scales, Brown soft scales, California red scales, Citricola scales, Citrus snow scales and Yellow scales.

Apply lower dosage early in the season or against light infestation and the higher dosage rate 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 more than 25 pounds of this product per acre per application. Do not apply less than 10 gallons of dilute spray mixture per mature tree. Allow a 5 day pre-harvest interval for these crops.

**FILBERT** — Use 1/4 pounds for Filbert aphids, Filbert leafrollers and Filbertworms. Apply when Leafroller eggs are hatching. Repeat on first appearance of adult Filbert moths and again 3 to 4 weeks later. With dilute sprays, 400 gallons per acre is suggested. Allow a 14 day pre-harvest interval.

**OLIVE** — Use 1 to 1 1/4 pounds for Olive scale control. For optimum scale control, apply when crawlers are present. A maximum of 2 applications is permitted.

Do not apply more than 18 1/2 pounds of this product per acre per application. Allow a 14 day pre-harvest interval.

**PEACHES, APRICOTS, NECTARINES** — Use 1/4 pounds for Apple pandemis, Codling moths, Cucumber beetles, European earwigs, Fruittree leafrollers, Japanese beetles, June beetles, Lecanium scales, Lesser peachtree borers, Olive scales, Orange tortrix, Oriental fruit moths, Peach twig borers, Periodical cicadas, Plum curculios, Redbanded leafrollers, San Jose scales, Tarnished plant bugs, Tussock moths and Variegated leafrollers. For optimum scale control, apply when crawlers are present. For Lesser peach tree borer control, spray limbs and trunk thoroughly, weekly during moth flight. Allow a 3 day pre-harvest interval on peaches.

Do not apply more than 7 1/2 pounds of this product per acre per application on Apricots. Allow a 3 day pre-harvest interval for Apricots and Nectarines.

**PECANS** — Use 1½ to 3 pounds for Pecan nut casebearers and Pecan weevils. Do not apply more than 9 pounds of this product per acre per application. Pecans have a 14 day pre-harvest interval.

**PLUMS, PRUNES, CHERRIES** — Use 1¼ pounds for Black cherry aphids, Brown soft scales, Cherry fruitworms, Cherry maggots, Eyespotted bud moths, Forbes scales, Fruittree leafrollers, Japanese beetles, Lecanium scales, Lesser peachtree borers, Mealy plum aphids, Oystershell scales, Peach twig borers, Plum curculios, Prune leafhoppers, Redbanded leafrollers and San Jose scales. 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 Codling moths, Eastern tent caterpillars, Orange tortrix and Tussock moths. Allow a 3 day pre-harvest interval.

**WALNUT** — Use ¾ pound for Calico scales, Codling moths, European fruit lecaniums, Filbertworms, Frosted scales and Fruittree leafrollers. Apply 1,000 gallons of dilute spray per acre for complete coverage. In concentrate spray, use 5 pounds in at least 200 gallons per acre. For Codling moths, apply first spray when average cross sectional diameters of developing nuts reach ½ to ¾ inch. Repeat during middle or late June as needed. Use 2½ pounds for European earwigs. Spray tree trunks to point of runoff. Allow a 14 day pre-harvest interval.

#### **SMALL FRUIT INSECT CONTROL**

Recommended dosages refer to pounds of this product per acre. Keep spray mixtures well agitated. Apply when insects or their damage appear. Repeat at 7 to 10 day intervals or as necessary.

**BLACKBERRIES, RASPBERRIES, DEWBERRIES (Including Boysenberries and Loganberries)** — Use 2½ pounds for European raspberry aphids, Japanese beetles, Leafhoppers and Leafrollers. In CA, use 2½ pounds for Omnivorous leafrollers and Raspberry sawflies. With dilute spray, 100 to 200 gallons per acre is suggested. Allow a 7 day pre-harvest interval.

**BLUEBERRIES** — Use 3 to 6 pounds for Blueberry maggots, Cherry and Cranberry fruitworms, European fruit lecaniums and Japanese beetles. Apply 3 weeks before harvest and repeat 10 days later or as necessary. With dilute sprays, 125 to 150 gallons per acre is suggested. Allow a 7 day pre-harvest interval.

**CRANBERRIES** — Use 1¼ to 3¼ pounds for Cranberry fireworms, Cutworms, Fruitworms, Japanese beetles and Leafhoppers. Apply in late bloom and as needed at 7 to 10 day intervals. With dilute sprays, 300 gallons per acre is suggested. Allow a 7 day pre-harvest interval.

**GRAPES** — Use 1¼ to 2½ pounds for European fruit lecaniums, Grape leafhoppers, Grape leafhoppers and Western grapeleaf skeletonizers. Apply just before first brood leafroller larvae emerge from rolls and as needed for leafhoppers. Use 2½ pounds for Cutworms, Grape berry moths, Japanese beetles, June beetles, Orange tortrix, Omnivorous leafrollers and Redbanded leafrollers. With dilute sprays, 200 gallons per acre is suggested. Allow a 7 day pre-harvest interval.

**STRAWBERRIES** — Use 1¼ to 2½ pounds for Meadow spittlebugs and Strawberry weevils. This product may injure Early dawn and Sunrise varieties on Delmarva Peninsula. With dilute sprays, 100 to 200 gallons per acre is suggested. Allow a 7 day pre-harvest interval.

#### **LAWN AND AREA INSECT CONTROL**

Use 1¼ pounds of this product in 150 to 200 gallons of water for each 5,000 square feet (2½ tablespoonfuls in 3 to 4 gallons of water for each 100 square feet) of established lawn area for control of Ants, Bluegrass billbugs, Chinch bugs, Cutworms, Earwigs, European chafers, Fall armyworms, Fleas, Green June beetles, Leafhoppers, Millipedes, Mosquitoes, Sod webworms (lawn moths).

In FL use 1½ pounds for Chinch bug control. Use garden hose sprayers or pressure type equipment. 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.

#### **SHADE TREE AND ORNAMENTAL INSECT CONTROL**

Use 1¼ pounds per 100 gallons of water (1¼ tablespoonfuls per gallon) when insects or their damage appears. Repeat weekly or as needed. This product injures Boston ivy, Virginia creeper and Maidenhair fern.

Use on herbaceous annual, biennial and perennial plants (such as Carnations, Chrysanthemum, Gladioli and Zinnia) to control: Blister beetles, Boxelder bugs, Flea beetles, Japanese beetles, June beetles, Lace bugs, Leafhoppers, Leafrollers, Mealybugs, Plant bugs, Psyllids, Rose aphids, Thrips (exposed). Use on Shrubs, Trees and Woody plants (such as Aborvitae, Azalea, Birch, Dogwood, Elm, Hydrangea, Juniper, Lilac, Maple, Oak, Pine and Rose) to control: Apple aphids, Bagworms, Birch leafminers, Boxelder bugs, Boxwood leafminers, Cankerworms, Cooley spruce galls, Eastern spruce gall aphids, Elm leaf aphids, Elm leaf beetles, Eriophyid

mites, Gypsy moths, Japanese beetles, June beetles, Lace bugs, Leafhoppers, Leafrollers, Mealybugs, Mimosa webworms, Oak leafminers, Orange tortrix, Periodical cicadas, Puss caterpillars, Plant bugs, Thorn bugs, Thrips (exposed), and Willow leaf beetles. This product does not control Spider mites but is compatible with most common miticides.

**FOREST TREES INSECT CONTROL (including Shade trees, Shelter belts, Forests, Plantations, Parks and Recreational Areas)** — Use 1¼ pounds of this product per acre by aircraft or hydraulic mist blower for Elm spanworms, Forest tent caterpillars, Great basin tent caterpillars, Gypsy moths, Saddled prominent Spring and Fall cankerworms. Apply when larvae are in early instars. Keep spray mixtures well agitated. Addition of a sticker may improve residual controls.

**ADULT MOSQUITOES** — On pastures, rangelands and non-agricultural land such as yards, parks, recreational areas, logging camps, military posts and adjacent forested lands or wastelands, use ½ to ¾ pound per acre in mist blowers, ¾ to 1 pound per acre in aerial sprays or 1¼ 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 1¼ 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 and shaded areas around buildings where adult Mosquitoes congregate. Repeat at 7 to 10 day intervals.

**Important**—May kill shrimp and crabs. Do not use in areas where shrimp and crabs are important resources.

#### **PEST CONTROL IN AND AROUND BUILDINGS**

(For use by Pest Control Operators only)

**IN AND AROUND BUILDINGS (such as Apartments, Barns, Homes, Municipal and Recreational Area and Warehouses)** — For Ants and Cockroaches, use 1 pound of this product per 4 gallons of water. For Brown dog ticks, Earwigs and Millipedes, use 1 pound of this product per 10 gallons of water. Apply as a coarse wet spray or with a paint brush and thoroughly treat cracks and crevices, baseboards, corners, walls, door sills and window frames, 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 a week.

**ON INTERIOR AND EXTERIOR WALL SURFACES, CEILINGS, EAVES AND ROOFS OR DWELLINGS CONSTRUCTED OF WOOD, BAMBOO, METAL CEMENT, BRICK, THATCH OR WHITEWASHED CLAY**— For residual control of adult Mosquitoes in subtropical and tropical regions, use 1 pound of this product per 4 gallons of water and apply the prepared spray per 2,000 square feet of surface area. Repeat in 3 to 6 months or when necessary.

**NOTE:** Do not use in edible products areas of food processing plants, restaurants or other areas where food is commercially prepared or processed. Do not use in serving areas while 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 "IMPORTANT". 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.

**POULTRY INSECT CONTROL (Chickens, Ducks, Game birds, Geese, Pigeons, Turkeys)** — **Direct Mist Spray on Birds:** Control Chicken mites, Fleas, Lice and Northern fowl mites by:

1. Misting with Electric Fog Machine: Mix ¾ pound (6 ounces) of this product in 1 gallon of spray. Use 1½ gallons per 1,000 hens in cages, on litter on slatted floor. Repeat in 4 weeks if necessary, or
2. Spraying with Knapsack or Cylinder Type Compressed Air Sprayer: Mix ¼ pound (4 ounces) of this product 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 roost and buildings with conventional power spray or knapsack equipment. Control Bedbugs, Chicken mites and Fleas by mixing 1½ pounds per 25 gallons and applying 1 to 2 gallons per 100 square feet of wall litter or roost surface. Increase dosage to 5 pounds per 25 gallons for Fowl ticks control. Force spray into cracks and crevices. 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 harvest.

6/6

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool, dry area away from any heat or ignition source. Do not allow storage in a damp or humid area. Do not stack over 2 pallets high. Move bags carefully so as not to tear or puncture. Do not move from one area to another unless they are securely sealed to prevent dust from escaping. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food feed and fertilizer to avoid contamination. Avoid contamination with acids and alkalies. Store in original containers only. If the contents are leaking or material is spilled follow these steps while wearing protective equipment.

1. Collect and place in suitable containers for disposal.
2. Wash area with soap and water to remove remaining pesticides.
3. Follow washing with clear water rinse.
4. Do not allow runoff to enter sewer or contaminate water supplies.
5. Dispose of waste as indicated below:

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

**CONTAINER DISPOSAL:** 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.

## WARRANTY—CONDITION OF SALE

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