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PM 12

19713-89

Ms. Les Shockey
Drexel Chemical Company
P.O. Box 9306
Memphis, TN 38109

Dear Ms. Shockey:

Subject: Drexel Carbaryl 2L
General Revision of Label in Response to the
Carbaryl Registration Standard
EPA Registration No. 19713-89
Your Application Dated January 3, 1985

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records. The following changes must be made and five copies submitted before you release this product for shipment.

- 1. Revise your Hazards To Humans And Domestic Animals paragraph to read:

CAUTION: Harmful if swallowed. Avoid breathing spray mist. Avoid contact with eyes, skin or clothing. Wear regular long-sleeved work clothing. Change to clean clothing daily. Wash hands and face before eating. Wash thoroughly after handling. Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

Statement of Practical Treatment
Note to Physician

- 2. Revise your Environmental Hazards paragraph to read:

This product is extremely toxic to aquatic and estuarine invertebrates. Do not apply directly to water or wetlands, except under the forest canopy. Do not contaminate water by cleaning of equipment or disposal of wastes.

CONCURRENTS

SYMBOL ▶								
SURNAME ▶								
DATE ▶								

- 3. Change the PHI for cowpeas from 0 day to 3 days.
- 4. Add the following statement to your Hazards To Humans paragraph.

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

Sincerely yours,

Jay S. Ellenberger
 Product Manager (12)
 Insecticide-Rodenticide Branch
 Registration Division (TS-767)

Enclosure

RD-IRB:JOB:85063:Ellenberger:RD-53:EK:Kendrick 898-1270:3/13/85:3/20/85



Mar 08 1985

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, Carbaryl 2L is a pesticide registered under EPA Reg. No. 19713-89

Carbaryl 2L

For effective control of many listed insect pests on Vegetable Crops, Tree Fruit and Nut Crops, Small Fruit Crops, Trees and Ornamentals, and Lawns and Recreation Areas. Also for control of mosquitoes and listed poultry pests. Can be used in the home as directed.

ACTIVE INGREDIENTS:
Carbaryl(1-naphthyl methylcarbamate)... 22.5%
INERT INGREDIENTS:..... 77.5%
TOTAL:..... 100.0%

Keep Out Of The Reach Of Children
CAUTION

EPA Registration Number 19713-89
EPA Establishment Number 19713-MS-1

GENERAL INFORMATION

Carbaryl 2L readily disperses in water to form a spray suspension suitable for home and garden use. **READ LABEL BEFORE USE. STRICTLY OBSERVE LABEL DIRECTIONS, AND APPLICABLE FEDERAL AND STATE REGULATIONS.**

Treated areas may be reentered immediately after the spray has dried. To avoid possible injury to tender foliage, do not apply to wet foliage or when rain or high humidity is expected during the next two days. Carbaryl 2L injures Boston ivy, Virginia creeper and maidenhair fern. During early season, it may also injure Virginia and Sand pines.

DIRECTIONS FOR USE

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

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

Read entire label. Use strictly according to label directions and cautions. Do not use application methods, dosages, concentrations or frequencies not listed on labeling. Do not apply against target pests or crops not listed on labeling. Do not mix with fertilizers.

SPRAY PREPARATION

To assure a uniform product, stir or shake all Carbaryl 2L containers prior to use. Clean sprayer thoroughly before use.

Prepare only as much spray mixture as is needed on the day of mixing. Fill sprayer with 1/2 to 3/4 the desired amount of water. Slowly add the required amount of Carbaryl 2L, and then the remaining volume of water. **Shake spray mixtures frequently before and during use to prevent settling.** Do not store spray mixtures overnight. To clean your sprayer after use, drain and flush with water. Do not use contaminated teaspoons or other measuring devices for other purposes.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
HARMFUL IF SWALLOWED: Avoid breathing of spray. Do not take internally. Avoid contact with skin and eyes. Wear regular long-sleeved work clothing. Change to clean clothing daily. Wash hands and face before eating. Wash thoroughly after handling.
Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.
CAUTION: May be harmful if swallowed. Avoid breathing spray mist. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling.
STATEMENT OF PRACTICAL TREATMENT
IF SWALLOWED: Induce vomiting by placing finger on back of throat. Call a physician. Never give anything by mouth to an unconscious person.
IF ON SKIN: Remove contaminated clothing and wash skin with soap and plenty of water. If irritation develops get medical attention.
IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. If irritation develops get medical attention.
NOTE TO PHYSICIAN: Carbaryl is a moderate, reversible, cholinesterase inhibitor. Atropine is antidotal. Do not use 2-PAM, opiates or cholinesterase inhibiting drugs.
ENVIRONMENTAL HAZARDS
Avoid application to lakes, streams and ponds. Do not apply when weather conditions favor drift from areas treated. May kill shrimp and crab. Do not apply where these are important resources. Do not contaminate water by cleaning equipment or disposal of wastes.
BEE CAUTION—May kill honeybees in substantial numbers. This product is highly toxic to bees exposed to direct treatment or residues on crops. Protective information may be obtained from your Cooperative Extension Service. Do not use when the value of honeybees as pollinators is more important than insect control. Before applying warn beekeepers to locate hives beyond bee flight range until one week after application or to take other equally effective precautions.
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 on blooming crops or weeds if bees are visiting the treatment area.
This product is extremely toxic to aquatic and estuarine invertebrates. Do not apply directly to water or wetlands, except under the forest canopy. Do not contaminate water by cleaning of equipment or disposal of wastes.

COMPATIBILITY
Carbaryl 2L when diluted with an equal volume of water, is compatible with a wide range of pesticides. It is not compatible with diesel fuel, kerosene, fuel oil

or aromatic solvents. If compatibility of Carbaryl 2L with another product and the resulting plant response is unknown, it should be tested on a small scale. Curdling, precipitation, greasing, layer formation or increased viscosity are symptoms of incompatibility. **When preparing combination sprays, first add Carbaryl 2L to at least an equal volume of water, mix thoroughly, and then add combination products to the mixture. Do not apply combinations unless your previous experience indicates the mixture is effective and will not result in application problems, excessive residues or plant injury.**

Unstable under highly alkaline conditions. Not effective if used with alkaline materials such as Bordeaux, lime-sulfur and casein-lime spreaders.

INSECT CONTROL

Apply when insects or their damage appear. To maintain control repeat at 7 to 14 day intervals or as necessary unless a shorter interval is specified below. Where a dosage range is indicated, use lower rate on young plants and early instars and higher rate on mature plants, advanced instars and adults. Thorough and uniform spray coverage is essential for effective control. Avoid applications just before rainfall as poor insect control may result.

Carbaryl 2L does not control spider mites. If spider mites are a problem, use a registered miticide.

VEGETABLE CROPS

All dosages refer to teaspoonfuls of Carbaryl 2L per gallon of water. Typical spray gallonage per 430 square feet range from 1-2 gallons. Do not exceed maximum dosage rate per 430 square feet per application. (One teaspoonful equals 0.17 fluid ounces or 5 milliliters. Three teaspoonfuls equal one tablespoonful).

Crops	Insect	Teas. of Carbaryl 2L/Gal.	Pre-Harvest Interval (Days)	Specific Directions
All Vegetable Crops in this section	Grasshoppers	2 to 6	See specific Vegetable Crop	Use 2 to 3 tsp/gal for nymphs on small plants or sparse vegetation. Use 4 to 6 tsp/gal for adult grasshoppers or application to dense vegetation.
Asparagus	Asparagus beetle Apache cicada Asparagus beetle	4 to 6 8 to 16	1 Post harvest application only	Treat ferns or brush growth. Do not treat more than once every 3 days.
Beans (including black-eyed peas, cowpeas, crowder or southern peas, dry beans, green beans, lima beans, navy beans and snap beans)	Bister beetles Mexican bean beetle	2 to 4		Observe plant response precautions
	Alfalfa caterpillar. Bean leaf beetle, Cucumber beetle, Flea beetles, Green clover worm, Japanese beetle, Leafhoppers, Three cornered alfalfa hopper, Thrips, Velvetbean caterpillar, Western bean cutworm	4	0	
	Armyworm, Corn earworm, Cutworms, European corn borer, Fall armyworm, Stink bugs, Tarnished plant bug, Webworms	4 to 6		
	Cowpea curculio	8		
	Corn earworm, Limbean pod borer, Lygus bugs, Stink bugs	8 8		CALIFORNIA ONLY
Cabbage Broccoli Brussels Sprouts Cauliflower Kohlrabi	Flea beetles, Harlequin bug Armyworm, Corn earworm, Fall armyworm, Imported Cabbage worm	2 to 4 4 to 8	 3	
Chinese cabbage Collards Manover salad Horseradish Kale Mustard greens Radishes Rutabagas Turnips	Flea beetles, Harlequin bug, Leafhoppers Aster leafhopper Armyworm, Corn earworm, Fall armyworm, Imported cabbage worm, Stink bugs, Tarnished plant bug	2 to 4 4 to 6 4 to 8	3 14 (Chinese cabbage collards)	(horseradish, radishes, rutabagas and turnip roots) Manover salad, kale, mustard greens, and turnip tops)

Crops	Insect	Teas. of Carbaryl 2L/Gal.	Pre-Harvest Interval (Days)	Specific Directions
Carrots Paranips Parsley Celery	Flea beetles, Leaf hoppers Aster leafhopper, Lygus bugs, Spittlebugs Armyworm, Corn earworm, Fall armyworm, Stink bugs, Tarnished plant bug	2 to 4 4 to 6 (celery & parsley)	0 (carrots) 3 (paranips) 14	Treat on a 5 to 7 day
Corn	Armyworm, Chinch bugs, Corn earworm, Corn root-worm adults, European corn borer, Fall armyworm, Flea beetles, Japanese beetle, Sap beetles, South-western corn borer, Leafhoppers	4 to 8	0	OBSERVE BEE CAUTION For insects attacking silks and ears apply at 1 to 6 day intervals starting when first silks appear and continuing until silks begin to dry. For larvae in whorl and foliage feeders, apply as necessary. For chinch bugs use high gallonage ground application directed at the base of plant. Optimum timing and good coverage are essential for effective control.
	Western bean cutworm	8	0	Treat when infestation averages 15% and at 80% to 100% tassal emergence. Treatment after 100% silk emergence will reduce effectiveness.
Cucumbers Melons Pumpkin Squash	Pickleworm, Melonworm Cucumber beetles, Flea beetles, Leafhoppers, Squash bugs	2 to 4 4	 0	Observe plant response precautions Avoid excessive applications
Dandelion Endive (Escarole) Lettuce Salsify	Flea beetles, Harlequin bug, Leafhoppers Aster leafhopper, Lygus bugs, Spittlebugs	2 to 4 4 to 6	3 (head lettuce & salsify roots) 14 (dandelion, endive (escarole), leaf lettuce & salsify tops)	Observe plant response precautions. Treat on a 5 to 7 day schedule after heads begin to form.
worm, Stink bugs	Armyworm, Corn earworm, Fall armyworm, Imported cabbage worm, Tarnished plant bug	4 to 8		
Garden beet Spinach Swiss chard	Flea beetles, Harlequin bug, Leafhoppers Aster leafhopper Armyworm, Corn earworm, Fall armyworm, Stink bugs, Tarnished plant bug	2 to 4 4 to 6 4 to 8	3 (garden beet roots) 14 (garden beet tops, spinach, Swiss chard)	Treat on a 5 to 7 day schedule
Okra	Corn earworm, Stink bugs	4 to 8	0	Treat on a 5 to 7 day schedule
Peanuts	Bister beetles, Mexican bean beetle Alfalfa caterpillar, Bean leaf beetle, Cucumber beetles, Green cloverworm, Japanese beetle, Leafhoppers, Red-necked peanut-worm, Three cornered alfalfa hopper, Thrips, Velvetbean caterpillar Armyworm, Corn earworm, Fall armyworm, Stink bugs, Webworms Cutworms, White-banded beetle adults	2 to 4 4 4 to 6 8		Observe plant response precautions
Peas	Colorado potato beetle, Leafhoppers Armyworm	4 4 to 6	0	

Crops	Insect	Type Of Carbaryl 2L/Gal	Pre-Harvest Interval (Days)	Specific Directions
Ward, Red Ward	Akalis caterpillar, Cutworms, Pine leaf	6		
	Yellow-striped armyworm			
	Akalis leoper	10		Washington State only
Potato Tomato Eggplant Pepper	Caterpillar potato beetle Fla beetles Leafhoppers	2 to 4		
	European corn borer, Fall armyworm, Lace bugs, Stink bugs, Tarnished plant bug, Tomato hornworm, Tomato pinworm	4 to 8	0	
	Cutworms	8		

TREE FRUIT AND NUT CROPS

All dosages refer to teaspoonfuls of Carbaryl 2L per gallon of water. Use sufficient spray gallonage to obtain thorough coverage. Do not exceed maximum rate of Carbaryl 2L per gallon of spray. (One teaspoonful equals 0.17 fluid ounces or 5 milliliters. Three teaspoonfuls equal one tablespoonful).

Crop	Type Of Carbaryl 2L	Pre-Harvest Interval (Days)	Specific Directions
Apple Thinning			Apply 1 full coverage dilute spray between 10 and 2 days after full bloom. If factors such as tree age, variety, nutrition, previous crop, pruning, bloom and degree of set favor excessive fruit thinning with Carbaryl 2L exercise caution to avoid possible yield reduction.
Apples only	1 to 2	1	For easily thinned varieties including Cortland, Grimes, Jonathan, McIntosh, Orleans, Rome Beauty, Puritan, Red Delicious, Winesap, Yellow Newton.
	2 to 4	1	For difficult to thin varieties including Baldwin, Ben Davis, Duchess, Early McIntosh, Golden Delicious, Lady Apple, Northern Spy, Rhode Island Greening, Steels Red, Turkey, Wealthy, Yellow Transparent and York Imperial.

Crops	Insect	Type Of Carbaryl 2L/Gal	Pre-Harvest Interval (Days)	Specific Directions
Almond	Peach twig borer San Jose Scale Fruitree leafroller	4	28	Apply in "popcorn" or petal fall stages and again when the May brood of the peach twig borer begins to hatch or thereafter as needed.
	Naval orange worm	4	28	Time early and mid season applications to correspond to moth flight peaks. Make a late season application at initiation of hull split or up to 10% hull split. Do not apply more than 3 fluid ounces of Carbaryl 2L per 430 sq. ft. per application.
Apples Pears	Apple aphid, Apple rust mite, Apple sucker, Bagworms, California pearslug (pear sawfly), Codling moth, Eyespotted bud moth			WEST OF THE ROCKY MOUNTAINS To Avoid undesired apple thinning, delay use until at least 30 days after full bloom.
Green Nuthorns	Lacanium scales, Lesser appleworm, Lygus bugs, Orange tortrix, Oystershell scale, Pear leaf blister mite, Pear psylla, Pear rust mite, San Jose scale, Tentiform leafminers, Woolly apple aphid	1		For psylla control apply when eggs hatch or young nymphs are present.
	Apple woollybug, Apple Aphid, Codling moth, White apple leafhopper	2		EAST OF THE ROCKY MOUNTAINS

Crops	Insect	Type Of Carbaryl 2L/Gal	Pre-Harvest Interval (Days)	Specific Directions
	Apple maggot, Apple rust mite, Bagworms, Eastern tent caterpillar, Eyespotted apple sawfly, Eyespotted bud moth, Forbes scale, Fruitree leafroller, Green Nuthorn, Japanese beetle, Lacanium scales, Lesser appleworm, Oystershell scale, Pear psylla, Pear rust blister mite, Pear rust mite, Periodical cicada, Plum curculio, Red-banded leafroller, Rose apple aphid, San Jose scale, Tarnished plant bug, Tentiform leafminers, Woolly apple aphid, Yellowheaded flyworm	4	1	To avoid undesired apple thinning, delay use until at least 30 days after full bloom. For optimum scale control apply when crawlers are present.
Citrus Fruits (Such as grapefruit, lemon, lime, oranges, tangerines, tangorines, citrus citrak, kumquats and hybrids)	Avocado leafroller, California orange dog, Citrus cutworm, Citrus root weevil, Fruitree leafroller, Orange tortrix, Western bussock moth, West Indian sugarcane borer (adult)	4	5	Do not apply more than 13 fluid ounces of Carbaryl 2L per 430 sq. ft. per application. Do not apply less than 10 ounces of dilute spray mixture per mature
	Black scale, Brown soft scale, California red scale, Citricola scale, Citrus snow scale, Yellow scale	3 to 4	5	
Fibart	Fibart aphid, Fibart leafroller, Fibartworm	4	0	Apply when leafroller eggs are hatching. Repeat at first appearance of adult Fibart moths and again 3 to 4 weeks later.
Olive	Olive scale	3 to 4	0	For optimum scale control add 12 teaspoons of summer oil per gallon and apply mixture when crawlers are present. Do not exceed 2 applications per year. Do not apply more than 9.6 fluid ounces of Carbaryl 2L per 430 sq. ft. per application.
Peaches Apricots Nectarines	Apple pandemis, Codling moth, Cucumber Beetles, European earwig, Fruitree leafroller, Japanese beetle, June beetles, Lacanium scales, Lesser peachtree borer, Olive scale, Orange tortrix, Oriental fruit moth, Peach twig borer, Periodical cicada, Plum curculio, Redbanded leafroller, San Jose scale, Tarnished plant bug, Tussock moth, Variegated leafroller	4	1 (peaches) 3 (apricots & nectarines)	Do not apply more than 4 fluid ounces of Carbaryl 2L per 430 sq. ft. per application to apricots. For optimum scale control apply when crawlers are present. Spray limbs and trunk thoroughly, weekly during moth flight.
Pecans	Black margined aphid, Fall webworm, Hickory shuckworm, Lesser webworm, Pecan leaf phylloxera, Pecan nut casebearer, Pecan apple-bug, Pecan weevil, Twig girdler, Walnut caterpillar	4 to 10	0	Do not apply more than 5 fluid ounces of Carbaryl 2L per 430 sq. ft. per application.
Plums Prunes Cherries	Black cherry aphid, Brown soft scale, Cherry fruitworm, Cherry maggot, European earwig, Eyespotted bud moth, Forbes scale, Fruitree leafroller, Green Nuthorn, Japanese beetle, Lacanium scales, Lesser peachtree borer, Mealy plum aphid, Oystershell scale, Peach twig borer, Plum curculio, Prune leafhopper, Redbanded leafroller, Rose chaffer, San Jose scale, Variegated leafroller	4		Do not apply more than 4 fluid ounces of Carbaryl 2L per 430 sq. ft. per application. For optimum scale control apply when crawlers are present. For lesser peachtree borer control, spray limbs and tree trunk thoroughly.

Crop	Amount Of Carbaryl 2L/Gallon	Specific Directions
Yards and Recreational Areas	1 to 2 table-spoonful/gal.	ADULT MOSQUITOES CAUTION: May kill shrimp and crabs. Do not use in areas where adult mosquitoes congregate. Treat when adult mosquitoes are active in early morning or late evening. Repeat at 7 to 10 day intervals.
	16 oz./gal.	For residual control in subtropical regions apply 4 gallons of prepared spray per 2000 sq. ft. of surface area. Repeat in 3 to 6 months or when necessary.
Ants Cockroaches	17 ounces/gal.	For use in and around buildings such as homes, apartments, warehouses, barns, and municipal and residential areas.
Brown dog, tick Earwig Flea M-Repede Silverfish	7 ounces/gal.	Apply as a coarse wet spray or with a paint brush to outdoor sleeping quarters of pets, outside perimeter of dwellings and other areas where insects tend to congregate. Do not use in food areas or food handling establishments, restaurants or other areas where food is commercially prepared or processed. Do not use in serving areas while food is exposed.

POULTRY INSECT CONTROL

Poultry	Insect	Specific Directions
Chickens Ducks Geese Gamebirds Pigeons Turkeys	Chicken mite Flea Lice Northern Fowl mite	FOR USE AS A DIRECT MIST SPRAY ON BIRDS BY: 1. Misting with Electric Fog Machine. Mix 20 ounces of Carbaryl 2L in 1 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 12 ounces of Carbaryl 2L 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 mite and flea is a supplement to spraying roosts and buildings for control of these pests. Do not apply to poultry and game birds within 7 days of slaughter.
Bed Bugs Chicken mite Flea Lice Northern fowl mite	5 table-spoon/gal.	Apply 12 to 25 ounces of spray mixture per 100 square feet of wall, litter or roost surface. Force spray into cracks. Repeat as needed. Avoid contamination of nests, eggs and feeding and watering troughs.
Fowl tick	10 ounces/gal.	Ventilate while spraying. Do not treat premises within 7 days of slaughter.
Less mealworms	33 ounces/gal.	Apply 25 ounces of spray mixture per 100 square feet of floor space or litter surface. Repeat as needed. Ventilate while spraying. Do not treat premises within 7 days of slaughter.

STORAGE AND DISPOSAL

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

STORAGE INSTRUCTIONS:

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

1. Contain spill, absorb with a material such as saw dust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with water and soap to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Place a leaking container in a plastic tub and transfer contents as soon as possible to an empty original container.
6. Do not allow run off to enter sewer or contaminate water supplies.
7. Dispose of 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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY—CONDITION OF SALE:

Drexel warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

Manufactured By

Drexel Chemical Company

P.O. BOX 9306, MEMPHIS, TENN. 38109-0306

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