10/25

SPECIAL LABELING REQUIRED FOR CARTONS CONTAINING WATER SOLUBLE PACKETS
379-7418.YLD Base Pre-Reg. (7418)

U.S. LABEL

Date of Pre-Reg Draft: 6/14/91 (M)

Reason to Issue: To reinstate use on blackberries, boysenberries, broccoli, brussel sprouts, cabbage, cauliflower, celery, loganberries, raspberries, and rye.

EPA Reg. No. 3125-379

GUTHION® SOLUPAK™
35% WETTABLE POWDER
CROP INSECTICIDE
IN WATER SOLUBLE PACKETS

ACTIVE INGREDIENT:

0,0-Dimethyl S-[(4-oxo-1,2,3
-benzotriazin-3(4H)-yl)methyll

phosphorodithioate

INERT INGREDIENTS:

ACCEPTED

FEB 1 0 1992

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 3125-379

35%

65%

100%

FOR EFFECTIVE ECONOMICAL INSECT CONTROL

Keep water soluble packets in this container and store in a cool dry place, but not below freezing (32°F). Protect from heat. Keep away from open flame. Do not heat. Entire inner packets dissolve in water. After opening outer carton, drop the required unopened inner packets into spray tank as directed. Do not excessively handle water soluble packet or expose it to moisture, since this may cause breakage.

EPA Reg. No. 3125-379

STOP - READ THE LABEL BEFORE USE

KEEP OUT OF REACH OF CHILDREN

DANGER

POISON

(See rear panel for Statements of Practical Treatment and other Precautionary Statements)

PELIGRO
PRECAUTION AL USUARIO: Si usted no puede leer
o entender inglés, no use este producto hasta
que la etiqueta le haya sido explicada
ampliamente.

(TO THE USER: If you cannot read or understand English, do not use this product until abel has been fully explained to you.)

CONTAINS FIVE 1-3/8 POUNDS WATER SOLUBLE PACKETS TOTAL NET CONTENTS 6-7/8 POUNDS

DEALERS SHOULD SELL IN ORIGINAL PACKAGES ONLY

MOBAY CORPORATION
A Bayer USA INC. COMPANY
AGRICULTURAL CHEMICALS DIVISION
Box 4913, Kansas City, MO. 64120

Note: Underlined letters in chemical nomenclature should be italicized when printed not underlined.

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DIRECTIONS FOR USE

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

IMPORTANT: Read these entire Directions and Conditions of Sale before using GUTHION SOLUPAK 35% Wettable Powder crop insecticide.

CONDITIONS OF SALE: THE DIRECTIONS ON THIS LABEL WERE DETERMINED THROUGH RESEARCH TO BE THE DIRECTIONS FOR CORRECT USE OF THIS PRODUCT. THIS PRODUCT HAS BEEN TESTED FOR A RANGE OF WEATHER CONDITIONS SIMILAR TO THOSE WEATHER CONDITIONS THAT ARE ORDINARY AND CUSTOMARY IN THE GEOGRAPHIC AREA WHERE THE PRODUCT IS USED. INSUFFICIENT CONTROL OF PESTS AND/OR INJURY TO THE CROP TO WHICH THE PRODUCT IS APPLIED MAY RESULT FROM THE OCCURRENCE OF EXTRAORDINARY OR UNUSUAL WEATHER, OR FROM FAILURE TO FOLLOW LABEL DIRECTIONS. IN ADDITION, FAILURE TO FOLLOW LABEL DIRECTIONS MAY CAUSE INJURY TO OTHER CROPS, ANIMALS, MAN, OR THE ENVIRONMENT. MOBAY OFFERS, AND THE BUYER ACCEPTS AND USES, THIS PRODUCT SUBJECT TO THE CONDITIONS THAT EXTRAORDINARY OR UNUSUAL WEATHER, OR FAILURE TO FOLLOW LABEL DIRECTIONS ARE BEYOND THE CONTROL OF MOBAY AND ARE, THEREFORE, THE RESPONSIBILITY OF THE BUYER.

MIXING: The enclosed packets containing GUTHION SOLUPAK insecticide are <u>water soluble</u>. Do not allow packet to become wet prior to adding to the spray tank. Do not handle with wet hands. Reseal outer carton to protect remaining packets.

To prepare the spray mixture, drop the required number of uropened packets, as determined under "Recommended Application", into the spray tank while filling with water to the desired level. Operate the agitator while mixing. Depending on the water temperature and the degree of agitation, the packets should be completely dissolved within approximately 5 minutes from the time they were added to the water.

COMPATIBILITY: GUTHION SOLUPAK is physically compatible with many registered pesticides and liquid fertilizers. When considering mixing GUTHION SOLUPAK with other pesticides or with liquid fertilizer, first contact your supplier. For further information, contact your local Mobay representative. If your supplier and Mobay representative have no experience with the combination you are considering, you should conduct tests to determine physical compatibility.

To determine physical compatibility, pour the recommended proportions of each chemical with the same proportion of water as will be present in the chemical supply tank into a suitable container, mix thoroughly and allow to stand for five minutes. If the combination-remains mixed, or can be remixed readily, the mixture is considered physically compatible. When mixing wettable powder or dry flowable formulations, add and disperse these first, then add liquid pesticides. Conduct another compatibility test at concentrations which will be present in the irrigation lines. If there is any separation which cannot be exemixed readily, Mobay recommends that the combination not be used.

Combinations should be kept agitated and should be applied immediately. Do not allow applied immediately. Do not allow applications to sit for prolonged periods in the chemical supply tank or irrigation lines.

DOSAGE: Use specified dosage of GUTHION SOLUPAK in the amount of water necessary to give complete coverage of foliage. Determine the total amount of wettable powder to be added to the spray tank based on the rates under "Recommended Applications". For each 1-3/8 lbs. of wettable powder to be added to the spray tank use one 1-3/8 lbs. packet. For example, if it is determined that 2-3/4 lbs. of GUTHION SOLUPAK should be added to the spray tank, add two 1-3/8 lbs. packets. The type of equipment used will determine the concentration required; however, use of these packets is not recommended for making highly concentrated mixtures such as used in aircraft spraying.

SPRAYING: Work to windward. Protect sprayer operators from drift or mist. When low volumes of spray are applied complete coverage and thorough application are essential for most effective results. Schedule applications in accordance with local conditions. Consult your State Agricultural Experiment Station or Extension Service for specific use information in your area.

CHEMIGATION

CUTHION SOLUPAK may be applied through recommended types of irrigation systems to many crops. The REMARKS section for each crop list the types of applications allowed. If application through irrigation systems is not listed in the REMARKS section for a crop, GUTHION SOLUPAK may not be applied to that crop through irrigation systems.

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

<u>Types of Irrigation Systems</u>

Apply GUTHION SOLUPAK only through sprinkler, including center pivot, lateral move, side roll, overhead solid set, or low pressure sprinkler irrigation systems. Do not apply GUTHION SOLUPAK through any other types of irrigation systems.

GENERAL DIRECTIONS FOR ALL RECOMMENDED TYPES OF IRRIGATION SYSTEMS

Uniform Water Distribution and System Calibration

The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

The system must be calibrated to uniformly apply the rates specified for chemigation application for specific crops. If you have questions about calibration, you should contact State Extension Service specialist, equipment manufacturers or other experts.

Chemigation Monitoring

A person knowledgeable of the chemigation system and responsible for its operations, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Drift

Do not apply when wind speed favors drift beyond the area intended for treatment.

Required System Safety Devices

The system must contain a functional check valve, vacuum relief valve, and the pressure of drain appropriately located on the irrigation pipeline to prevent water source.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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Required System Safety Devices (Continued)

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point when pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Using Water from Public Water Systems

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly services an average of at least 25 individuals daily at least 60 days out of the year.

DO NOT APPLY GUTHION SOLUPAK THROUGH ANY IRRIGATION SYSTEM <u>SUPPLIED</u> BY A PUBLIC WATER SYSTEM UNLESS the water from the public water system is discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Any irrigation system using water supplied from a public water system must also meet the following requirements:

The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-dperated valve: located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the immigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Posting Requirements

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements: Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive areas. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2-1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

Posting required for chemigation does not replace other posting and reentry interval requirements for farmworker safety.

Compatibility

When mixing with other chemicals refer to Compatibility section elsewhere on label.

<u>Agitation</u>

For application of GUTHION SOLUPAK, a chemical supply tank is necessary for premixing. For application of GUTHION SOLUPAK alone or in combination with liquid fertilizer or other chemicals, constant strong mechanical or hydraulic agitation must be maintained in the chemical supply tank during the entire period of application.

Chemical Supply Tank Dilution

You must determine the required amounts of GUTHION SOLUPAK to mix in the tank.

The amount of GUTHION SOLUPAK needed equals the number of pounds of GUTHION SOLUPAK to be applied per acre multiplied by the number of acres to be chemigated.

The amount of solution needed equals the gallons of solution delivered per hour by the injection pump multiplied by the number of hours chemigation will take place....

For example, if you want to apply 2 pounds of GUTHION SOLUPAK per acre to 130 acres in 20 hours and your injection pump delivers 15 gallons per hour, you need: 2 pounds GUTHION SOLUPAK per acre X 130 acres = 260 pounds of GUTHION SOLUPAK. And, you need: 15 gallons per hour X 20 hours = 300 gallons of suspension = 300 gallons of water.

Cleaning the Chemical Injection System

In order to accurately apply pesticides, the chemical injection system must be kept clean; free of chemical or fertilizer residues and sediments. Refer to your owners manual or ask your equipment supplier for cleaning procedure for your injection system.

Flushing the Irrigation System

At the end of the application period, allow time for all lines to flush the pesticide through all nozzles or emitters before turning off irrigation water. To ensure the lines are flushed and free of pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

Equipment Area Contamination

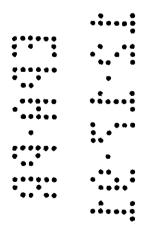
It is recommended that nozzles in the immediate area of control panels, chemical supply tanks, pumps and system safety devices be plugged to prevent chemical contamination of these areas.

Center-Pivot and Automatic-Move Linear Systems

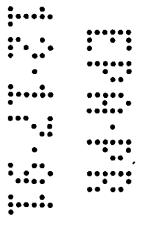
Inject the specified dosage per acre continuosly for one complete revolution or move of the system. DO NOT USE END GUNS. For a foliar application, the system should be run at maximum speed.

Solid Set and Manually Controlled Linear Systems

For foliar application, injection should be during the last 30 to 60 minutes of regular irrigation period <u>or</u> as a separate 30 to 60 minute application not associated with a regular irrigation. DO NOT USE END GUNS.



CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS
FIELD CROPS Alfalfa	Leafhoppers	11/16 to 1-7/16	Apply specified dosage per acre by air or ground equipment. Use at least 10 gallons of water per acre
Birdsfoot trefoil (East of the Mississippi River only)	Alfalfa weevil Egyptian alfalfa weevil	1-1/16 to 1-7/16	with ground equipment and at least 1 gallon of water per acre for aerial application. It may be necessary to use 20 to 25 gallons of water per acre on heavy growth for control of alfalfa weevil or Egyptian alfalfa
	Alfalfa plant bug Fleahopper Grasshoppers Lygus bugs Spittlebugs	1-7/16	weevil with ground equipment. For application by irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label. Only one application per cutting may be made regardless of rate, formulation or method of application used. Do not apply within 14 days of harvest at the rates of 11/16 to 1-1/16 pounds per acre or within 16 days of harvest at the rate of 1-7/16 pound per acre.
Rye	Cereal leaf beetle	1 to 1-3/8	Apply specified dosage per acre in sufficient water for complete coverage. Do not apply more than once per season. Do not harvest for food, feed, forage or graze within 30 days of treatment.



<u>FRUIT</u> NOTE: It is suggested that when treating fruit during the bloom period, bee keepers should be warned well in advance to remove hives a safe distance from orchards to be treated.

CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS
Apples Crab apples Pears	Aphids* Apple maggot Codling moth European apple sawfly Eye-spotted bud moth Forbes scale Fruittree leaf roller Green fruitworm* Leafhoppers* Mealybug* Orange tortrix Pear midge Plum curculio Putnam scale Red-banded leaf roller San Jose' scale* Stink bug Tarnished plant bug*	2-13/16 to 4-1/4 [11/16 to 1-1/16 per 100 gallons]	Apply specified dosage per acre by air or ground equipment in sufficient water for good coverage. Up to 17-1/8 pounds GUTHION SOLUPAK may be applied per crop season. Allow at least 7 days between applications and 7 days between last application and harvest. GUTHION SOLUPAK is compatible with dormant and summer oils which may be added to apple and pear sprays in accordance with local recommendations.
Cherries	Eye-spotted bud moth Forbes scale Fruit flies Fruit tree leaf roller Lesser peach tree borer Plum curculio San Jose' scale* Cherry leaf miner Mineola moth	2-1/8 [11/16 pound per 100 gallons]	Apply specified dosage per acre as a full coverage spray. Up to 8-1/2 pounds of GUTHION SOLUPAK may be applied per acre per crop season. Allow at least 14 days between applications and 15 days between last application and harvest. California: Apply post-harvest only.

CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS
Rectarines Peaches (Eastern U.S.)	Aphids* Cottony paach scale European fruit lecanium scale forbes scale Lesser peach tree borer Oriental fruit moth Peach twig borer Peach tree borer Platynota flavidana leaf roller Plum curculio Redbanded leaf roller San Jose cale* Stink bug Thrips Tarnished plant bug Terrapin scale Walnut scale White peach scale	2-1/2 to 3-3/16 [11/16 to 7/8 pounds per 100 gallons]	Apply specified dosage per acre a a full coverage spray. Allow at least 14 days between application A total of 9-5/8 pounds per acre per crop season may be applied to nectarines. A total of 12-13/16 pounds per acre per crop season may be applied to peaches. Allow at least 21 days between la application and harvest. For control of peach tree borer, apply 2 or 3 sprays to trunk from ground to scaffold limbs, timed with moth flight. For control of scale, apply when crawlers are present. GUTHION SOLUPAK is compatible with dormant and summer oils which may be added to peach sprays in accordance with local recommendations.
Nectarines Peaches (West of the Rocky Mountains)	Lesser peach tree borer Oriental fruit moth Peach twig borer Peach tree borer Platynota flavidana leaf roller Plum curculio Redbanded leaf roller Stink bug Thrips Tarnished plant bug	4-1/4 to 5-11/16	Apply specified dosage per acre. Allow at least 14 days between applications. A total of 9-5/8 pounds per acre per crop season may be applied to nectarines. A total of 12-13/16 pounds per acre per crop season be applied to peaches. Allow at least 21 days between laapplication and harvest. For control of peach tree borer apply 2 or 3 sprays to trunk from ground to scaffold limbs, timed with moth flight.

CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS
Plums Prunes (Eastern U.S.)	Aphids* Codling moth Eye-spotted bud moth Forbes scale Fruit tree leaf roller Lesser peach tree borer Orange tortrix Peach tree borer Plum curculio Redbanded leaf roller San Jose' scale* Sting bug Tarnished plant bug* Tussock moth	2-1/2 to 3-9/16 [11/16 to 7/8 pound per 100 gallons]	Apply specified dosage per acre as a full coverage spray. A total of 9-5/8 pounds per acre per crop season may be applied to plums and prunes. Allow at least 10 days between applications. Allow at least 15 days between last application and harvest. For control of peach tree borer, apply 2 or 3 sprays to trunk from ground to scaffold limbs, timed with moth flight. For control of scale, apply when crawlers are present. GUTHION SOLUPAK is compatible with dormant and summer oils which may be added to prune sprays in accordance
	American plum borer	4-1/4	with local recommendations.
Plums Prunes (West of the Rocky Mountains)	Codling moth Eye-spotted bud moth Fruit tree leaf roller Lesser peach tree borer Orange tortrix Peach tree borer Peach twig borer Plum curculio Redbanded leaf roller Sting bug Tarnished plant bug* Tussock moth	2-13/16 to 5-11/16	Apply specified dosage per acre. A total of 9-5/8 pounds per acre per crop season may be applied to plums and prunes. Allow at least 10 days between applications. Allow at least 15 days between last application and harvest. For control of peach tree borer, apply 2 or 3 sprays to trunk from ground to scaffold limbs, timed with moth flight.
	American plum borer	4-1/4 to 5-11/16	

CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS
FRUIT (Continued)			
Blackberries Boysenberries	Leafhoppers Leaf rollers	5/8	Apply specified dosage per acre to foliage using approximately 200
Loganberries Raspberries	Leafminers	7/8	gallons of water for good coverage.
kaspberries	Aphids*	7/8 to 1-3/8	Do not apply more than twice per
	Obscure root weevil	1-3/8	season, nor within 14 days of harvest.
	Obscure root weevil	1-3/8	For control of root weevils prior to harvest, apply specified dosage per acre to lower portion of canes and t the soil beneath the plants using approximately 200 gallons of water. Do not apply more than twice per season. Do not make applications within 3 days of harvest.
Blueberries (Eastern and North Central States only)	Blueberry maggot Fruitworms Lecanium scale Plum curculio	1-7/16 to 2-1/8	Apply specified dosage per acre with aerial or ground equipment using sufficient water for good coverage. A total of 3 applications may be mad per crop season regardless of rate of formulation used. Allow at least 10 days between applications and at least 7 days between last application and harvest
Cranberries	Cranberry fruitworm <u>Sparganothis</u> <u>sulfureana</u> Tipworm	1-7/16 to 2-13/16	Apply specified dosage per acre by air using sufficient water for good coverage. For application by irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.
	Fireworms	2-13/16	A total of 3 applications may be mad per crop season regardless of rate of formulation used. Allow at least 14 days between applications and at least 21 days between last application and harvest

CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS
FRUIT (Cont Citrus Fruits		3-1/2 to 5-11/16	Apply specified dosage per acre as a full coverage spray. A single application per year may be applied up to within 7 days of harvest. Where 2 applications are required, allow at least 28 days between the second application and harvest. A total of 2 applications may be applied per fruit year regardless of rate or formulation used. Do not pick fruit or do other work involving contact with the tree (such as pruning) within 7 days after treatment. Citrus rootweevil complex includes sugarcane rootstalk borer (apopka weevil), fuller rose beetle, little leaf notcher, and two species of blue green citrus rootweevil.
	California red scale Yellow scale	5-11/16	
Grapes	Grape berry moth Grape cane girdlers Grape mealybug Leafhoppers* Redbanded leaf Thrips Grape leaf skeletonizer	2-1/8 to 2-13/16	Apply specified dosage per acre as a full coverage spray. A total of 3 applications may be made per crop season regardless of rate or formulation used. Allow at least 14 days between applications. Minimum dosage specified may be applied up to harvest. With higher rates allow at least 10 days between last application and harvest.

CROP INSECT GUTHION SOLUPAK REMARKS FRUIT (Continued)	
Apply specified dosage per a full coverage spray using su water for good coverage. For application by irrigation sy Apply specified dosage per a full coverage spray using su water for good coverage. For application by irrigation sy Apply specified dosage per application sy Apply specified dosage per application by irrigation sy Apply specified dosage per application sy Apply specified dosage per application by irrigation sy Apply specified dosage per application sy Apply specified dosage per apply specified dosage per apply specified dosage per apply speci	sufficient for systems: acre. n under the s label. nay be made of rate or een 5 days

*In some areas, these species may have developed resistance to organophosphate insecticides. GUTHION insecticide used alone may not provide satisfactory control in those areas. Consult your local agricultural advisor or cooperative extension service for recommendations.

for recomme	endations.	Y	
<u>NUTS</u>			Apply specified dosage per acre by concentrate sprayer or as a full
Almonds	Peach twig borer Navel orangeworm	4-1/4 to 5-11/16	coverage spray using not more than 400 gallons of finished spray per acre. If conditions dictate an aerial spray, apply specified dosage by aircraft in not less than 20 gallons of water per acre. Application is limited to one dormant spray and/or two postbloom sprays per season. Last application may be made up to 28 days before harvest. Allow at least 120 days between the dormant and the first post-bloom spray and at least 28 days between the post-bloom spray. Do not graze livestock in treated groves for 21 days after treatment.
Filberts (Pacific Northwest only)	Apple mealybug Filbert worm Filbert aphid Filbert leaf roller	4-1/4 to 5-11/16	Apply specified dosage parters as a full coverage spray. A total of 3 applications may be made per crop season regardless of rate or formulation used. Allow at least 14 days Between applications and at least 30 days between last application and harvest. Do not graze livestock in treated groves for 21 days after treatment.

CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS
ROP UTS (Cont ecans		4-1/4 to 5-11/16	Apply specified dosage per acre as a full coverage spray. A total of 3 applications may be made per crop season regardless of rate or formulation used. Allow at least 7 days between
	stink bug Spittlebugs Twig girdlers Walnut caterpillars		applications. Do not apply after shuck split. Livestock may be grazed in treated groves after a 21-day post-treatment interval. *In some areas, these species may have developed resistance to organophosphate insecticides. GUTHION insecticide used alone may not provide satisfactory control in those areas. Consult your local agricultural advisor or cooperative extension service for recommendations.
alnuts	Codling moth Filbertworm Navel orangeworm Walnut husk fly Red-humped caterpillar	4-1/4 to 5-11/16	Apply specified dosage per acre as a full coverage spray. A total of 3 applications may be made per crop season regardless of rate or formulation used.
			Allow at least 14 days between applications. Do not apply after husks split. Do not graze livestock in treated groves for 21 days after treatment.

GUTHION SOLUPAK 35% Wettable Powder Insecticide

		RECOMMENDED APPL POUNDS	ICATIONS
CROP	INSECT	GUTHION SOLUPAK	REMARKS Apply specified dosage per acre in
<u>VEGETABLES</u> Artichokes	Plume moth	4-1/4	sufficient water for complete coverage. For application by irrigation system: Apply specified dosage per acre. Followall directions given under the CHEMIGATION section of this label. A total of applications may be made per crop season regardless of rate, formulation or method of application used.
			Allow at least 14 days between applica- tions and at least 30 days between last application and harvest.
			Do not feed or ensile treated forage.
Broccoli Brussels Sprouts Cabbage (Includes tight	Aphids* Cabbage looper Diamondback moth Imported cabbageworm	1-3/8 to 2-1/8	Apply specified dosage per acre in sufficient water for complete coverage. Do not apply within 7 days of harvest for Brussels sprouts, 15 days of harves for broccoli and cauliflower, nor within 21 days of harvest for cabbage.
heading varieties of			Do not exceed more than 3 applications per season.
Chinese cabbage) Cauliflower	Cabbage maggot	1/4 to 1/2	Mix specified dosage in 50 gallons of water. Apply 4 to 6 ounces of this emulsion per plant at or immediately after transplanting.
	Cabbage maggot (Direct seeded fields in California only)	2-1/8	Apply specified dosage per acre in sufficient water for uniform distribution. Mix in upper 2 inches or soil prior to seeding or spray in the seed row at planting time. Usually 2 additional sprays are necessary during the growing season, depending on time year and maggot populations. Do not apply within 21 days of harvest.
	Cabbage maggot (Transplant fields in California only)	2-1/8	Apply specified dosage in 300 to 400 gallons of water per acre as soil drench in rows when damage first appears. Additional applications may necessary. Do not apply within 21 day of harvest.
			Do not exceed more than 3 applications per season.

CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS
VEGETABLES Celery	Aphids* Leaf miners Leafhoppers Spittlebug Tarnished plant bug	1-3/8	Apply specified dosage in 100 gallons of water as a full coverage spray** using not more than 200 gallons of finished spray per acre. Do not apply within 14 days of harvest. Do not exceed more than 3 applications per season.
Cucumbers	Spotted cucumber beetle Striped cucumber beetle Western-striped cucumber beetle	1-7/16	Apply specified dosage per acre in sufficient water for complete coverage. For application by irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label. A total of applications may be made per crop season regardless of rate, formulation or method of application used. Allow at least 7 days between applications and at least 1 day between last
Eggplant	Leaf miners	1-1/16 to 1-7/16	Application and harvest. Apply specified dosage per acre in sufficient water for complete coverage. For application by irrigation systems:
	European corn borer Flea beetles	1-7/16	Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label. A total of applications may be made per crop season regardless of rate, formulation or method of application used.
			Allow at least 7 days between applications, and allow at least 21 days between last application and harvest.
Ohions (Green and Drye)	Thrips	1-7/16 to 2-1/8	Apply specified dosage per acre by air or ground equipment in sufficient water for complete coverage. For application by irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label. A total of 3 applications may be made per crop season regardless of rate, formulation or method of application used.
•			(Continued)

CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS
VEGETABLES (Con Onions (Green and Dry) (Continued	tinued)		Allow at least 7 days between applications for dry bulb onions. Allow least 10 days between applications figreen onions. For dry onions, allow at least 28 day between last application and harvest for green onions, allow at least 14 days between last application and
Peppers	Leaf miners European corn borers Flea beetles	1-1/16 to 1-7/16 1-7/16	harvest. Apply specified dosage per acre by a or ground equipment in sufficient water for complete coverage. For application by irrigation systems: App specified dosage per acre. Follow a directions given under the CHEMIGATI section of this label. A total of 3 applications may be made per crop season regardless of rate, formulation method of application used. Allow at least 7 days between applications and 21 days between last appli
Potatoes	Colorado potato beetle	1-1/16	cation and harvest. Apply specified dosage per acre in sufficient water for complete coverage. For application by irrigation systems: Apply specified dosage per
1	Banded cucumber beetle Leaf miners	1-1/16 to 1-7/16	acre. Follow all directions given under the CHEMIGATION section of the label. A total of 3 applications make made per crop season regardless crate, formulation or method of applications.
	European corn borer Flea beetle Leafhoppers Spittlebugs Tarnished plant bug	1-7/16 to 2-1/8	Allow at least 7 days between applications and 7 days between last application and harvest. NOTE: Resistance of Colorado potato beetle has occurred in some areas: Consult your local Extension Service or MOBAY Sales representative for details.
	Tuberworm	1-9/16 to 2-1/8	

CROP	INSECT	POUNDS GUTHION_SOLUPAK	REMARKS	
	(Continued)	GOTITON SOLOPAK	REPARKS	
Tomatoes	Colorado potato beetle	1-1/16	Apply specified dosage per acre by air or ground equipment in sufficient water for complete coverage. For applica-	
	Banded cucumber beetle Drosophila Green stink bug Leaf miners Whitefly	1-1/16 to 1-7/16	tion by irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label. A total of 4 applications may be made per crop season regardless of rate, formulation or method of application used. The high rates should be used where heavy infestations of late instar lepidopterous larvae (large worms) and pinworms are present. Allow at least 7 days between applications. Rates of 2-1/8 pounds per acre or less may be applied up to day of harvest. Rates above 2-1/8 pounds require an interval of 14 days between last application and harvest. NOTE: Resistance of Colorado potato beetle has occurred in some areas. Consult your local Extension Service or MOBAY Sales Representative for details. *In some areas, these species may have developed resistance to organophosphate insecticides. GUTHION insecticide used alone may not provide satisfactory control in those areas. Consult your local agricultural advisor or cooperative extension service for recommendations.	
	Aphids* European corn borer Flea beetles Grasshoppers Leafhoppers Thrips	1-7/16 to 2-1/8		
	Tuberworm	1-9/16 to 2-1/8		
	Fruitworm Hornworm Pinworm Yellow-striped armyworm	2-1/8 to 4-1/4		
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CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS
MELONS Honeydew Melons Muskmelon	Leafhoppers Leaf miners	1-1/16 to 1-7/16	Apply specified dosage per acre is sufficient water to give complete coverage. For application by irrigation systems: Apply specified dosage per acre. Followall directions given under the CHEMIGATION section of this labely A total of 3 applications may be made per crop season regardless or rate, formulation or method of application used.
(Cantaloupe) Watermelons Other Melons	Rindworms Spotted cucumber beetle Striped cucumber beetle Western-striped cucumber beetle	1-7/16	
			Allow at least 5 days between applications and at least 7 days between last application and harvest.
ORNAMENTALS Southern Pine Seed Orchards	Coneworm Seedworm	See Remarks	Use 3.25 pounds per 100 gallons of water (0.2% dilution) as a full coverage spray**. Use 1.6 pounds per 10 gallons of water (1% dilution) for low volume sprayers Apply first application within 30 days following conelet closure, followed by 3 to 5 applications (at least 30 days apart). Apply approximately 5 to 10 gallons of the 0.2% dilution with high volume sprayers or approximately 1 to 2 gallons of the 1% dilution with low volume sprayers per tree Thorough coverage of cones is necessary for maximum control.

GUTHION SOLUPAK 35% Wettable Powder Insecticide

CROP	INSECT	POUNDS GUTHION SOLUPAK	REMARKS			
RNAMENTALS ((Cont'd)					
Ornamentals Nursery Plants	Aphids Cerococus scale Euonymus scale Juniper scale Lace bugs Leafhoppers Mites Olive scale Oystershell scale Pulvinaria scale Thrips	1 to 1-3/8	Apply specified dosage per 100 gallons of water. Spray all foliage surfaces including including the underside of leaves for complete coverage. For control of black pine leaf, brown soft, European elm, and Putnam scales, use the higher rate. Repeat as necessary.			
	Brown soft	2-3/4				
	scale	•				
	Putnam scale European elm	-				
	scale					
	Black pine	2-1/8 to				
	leaf scale	2-3/4				
	Cone midge Cone moth	5-1/2 to 11	Apply specified dosage per 100 gallons of water. Time applications to coincide with moth flight when cones are open for pollination. Thorough coverage of cones is necessary for maximum control. Repeat as necessary.			
•••	European pine •shoot moth •Nantucket pine •tip moth	1 to 2-1/8	Apply specified dosage per acre in sufficient water for good coverage. Time applications to coincide with moth flights.			
	Injury to hawthorn or American linden may occur under some conditions. DO NOT allow children or pets on treated area until material has been washed into soil and treated area is dry.					
CMristmas Crees	Scale spp. Sawfly spp. European pine shoot moth Eastern pine shoot borer Nantucket pine tip moth	1 to 2-1/8	Apply specified dosage per acre by air or ground equipment in sufficient water to give complete coverage but not less than 1 gallon per acre. Time applications to coincide with susceptible pest development.			

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Do not allow children or pets in treated area until material is dry.

*In some areas, these species may have developed resistance to organophosphate insecticides. GUTHION insecticide used alone may not provide satisfactory control in those areas. Consult your local agricultural advisor or cooperative extension service for recommendations.

**This concentration is calculated for conventional, hydraulic-type sprayers. When lower volumes of spray per acre are applied with concentrate sprayers, the concentration of GUTHION SOLUPAK in the spray mixture must be increased in order to apply the amount of GUTHION SOLUPAK per acre equivalent to a full coverage spray. In Southern Pine Seed Orchards where conditions dictate an air application, apply dosage per acre equivalent to a full coverage ground spray in not less than one gallon of water per acre.

RESTRICTIONS

Do not use on other crops used for food or forage. Use only according to label directions. Application at rates above those shown may result in illegal crop residues. Do not graze livestock in treated orchards or groves for 21 days after treatment. Do not treat food crops grown in the greenhouse.

RE-ENTRY STATEMENTS FOR FARMWORKERS

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter treated areas for 24 hours after application unless protective clothing is worn, as described in the product labeling. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

(The following may appear on Supplemental Labeling accompanying the product)
Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings should include those statements found under the label heading "Precautionary Statements" and "Re-entry Statements" included on this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: DANGER, area treated with GUTHION SOLUPAK or clate of application). Do not enter treated areas for 24 hours after application unlass. protective clothing is worn, as described in the product labeling. If on skin, remove contaminated clothing and wash skin immediately with soap and warm water. Freques are contaminated, wash with flowing water for at least 15 minutes. If swallowed, vomiting should be induced. (See Precautionary Statements on label).

ROTATIONAL CROPS

Do no. plant root crops other than those with registered azinphos-methyl uses in azinphos-methyl treated soil sooner than 6 months after the last application. Do not plant any other crop other than those with registered azinphos-methyl uses in treated soil sooner than 30 days after last application.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER POISON

Fatal if swallowed. Harmful if inhaled or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Spray operator should work to windward to stay out of drift or mist.

When loading spray tank wear protective clothing, natural rubber gloves and goggles.

Do not contaminate feed or foodstuffs. Keep out of reach of children and domestic animals. Keep all unprotected persons out of the operating area or vicinity where there may be danger of drift. Wash thoroughly with soap and warm water after handling. Remove and wash all contaminated clothing with soap and hot water before reuse.

SYMPTOMS OF POISONING: A sense of "tightness" in the chest. Sweating. Contracted pupils. Stomach pains. Vomiting and diarrhea.

STATEMENTS OF PRACTICAL TREATMENT

In case of poisoning, call a physician immediately. Have patient 1.2 down and keep quiet. If swallowed, womiting should be induced. Administer water freely and induce vomiting by giving one dose (1/2 oz. or 15 ml.) of syrup of ipecac. If vomiting does not occur within 10 to 20 minutes, administer second dose. If syrup of ipecac is not available, induce womiting by sticking finger down throat. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Professional medical assistance should be secured immediately. If on skin, remove contaminated clothing and wash skin immediately with soap and warm water. If eves are contaminated, wash with flowing water for at least 15 minutes. If inhaled, remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

FO PRISICIANS

ANTIDOTE - Administer atropine sulfate in large therapeutic doses. Repeat as necessary to the point of tolerance. 2-PAM is also antidotal and may be administered in conjunction with atropine:

GUTHION SOLUPAK 35% Wettable Powder Insecticide

Compound inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves. Do not give morphine. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 12 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and wildlife.

Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Do not contaminate water by cleaning of equipment or disposal of wastes. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

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. Protective information may be obtained from your Cooperative Agricultural Extension Service.

PROTECTIVE CLOTHING AND WORK SAFETY STATEMENTS

If handled indoors provide mechanical exhaust ventilation.

Keep all unprotected persons, children, livestock, and pets away from treated areas or where there is danger of drift.

Do not rub eyes or mouth with hands. If you feel sick in any way, STOP work and get help right away. See First Aid section of the label.

For questions regarding further treatment, or information about the product, call the National Pesticide Telecommunications Network at 800-858-7378.

MANDLE THE CONCENTRATE ONLY WHEN WEARING THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT:

Wear a protective suit of one or two pieces that covers all parts of the body except the head, hands, and feet. Wear chemical resistant gloves, chemical resistant appropriate and chemical resistant shoes, shoe coverings, or boots. Wear goggles or a face shield and a pesticide respirator approved by the National Institute for Occupational Safety and thealth under the provision of 30 CFR Part 11.

WEAR THE FOLLOWING PROTECTIVE CLOTHING DURING APPLICATION, EQUIPMENT REPAIR, EQUIPMENT. CLEANING, DURING REENTRY TO TREATED AREAS, AND DISPOSAL OF THE PESTICIDE:

Wear a protective suit of one or two pieces that covers all parts of the body except the head, hands, and feet. Wear chemical resistant gloves and chemical resistant shoes, show coverings, or boots. Wear a chemical resistant hat during airblast application.

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PROTECTIVE CLOTHING AND WORK SAETY STATEMENTS (Continued)

During application from an enclosed tractor cab or airplane cockpit, or other suitable vehicle in which the windows are rolled up, long sleeved shirt and long pants may be worn in place of the above protective clothing. Chemical resistant gloves must be available in the cab or cockpit and must be worn while exiting. This clothing is inadequate to protect you during equipment repair, equipment cleaning, re-entry, or during pesticide disposal.

IMPORTANT! BEFORE REMOVING GLOVES, WASH THEM WITH SOAP AND WATER. ALWAYS WASH HANDS, FACE, AND ARMS WITH SOAP AND WATER BEFORE SMOKING, DRINKING, EATING OR TOILETING.

After work, take off all clothing and shoes. Shower using soap and water. Do not wear contaminated clothing. Wash protective clothing and protective equipment with soap and water after each use. Respirators must be cleaned and filters replaced according to instructions included with the respirators. Personal clothing worn during use must be laundered separately from household articles. Clothing and protective equipment heavily contaminated or drenched with GUTHION azinphos-methyl must be destroyed according to state and local regulations. HEAVILY CONTAMINATED OR DRENCHED CLOTHING CANNOT BE ADEQUATELY DECONTAMINATED.

During aerial application, human flaggers are prohibited unless in totally enclosed vehicle.

STORAGE AND DISPOSAL

<u>Pesticide Disposal</u>: Do not contaminate water, food or feed by storage or disposal.

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

<u>Container Disposal</u>: Do not use container in connection with food, feed, or drinking water. Completely empty carton into application equipment. Then dispose of empty carton in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Store in a coor, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Do not store below freezing (32°F). Exposure to moisture or excessive handling of water soluble packets may cause breakage. Store packets in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking of Material spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Dispose of pesticide as directed above. In spill or leak incidents, keep unauthorized people away. You may contact the Mobay Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Mobay Kansas City Emergency Response Telephone No. is 816-242-2582, or contact Chemtrec at 800-424-9300.

GUTHION is a Reg. TM of Bayer AG, Germany. SOLUPAK is a TM of Mobay Corporation

Base Reg. (7418a)

LABELING FOR 1-3/8 POUND PACKET

GUTHION→ SOLUPAK™ 35% WETTABLE POWDER **CROP INSECTICIDE**

ACTIVE INGREDIENT:

EPA Reg No. 3125-379

KEEP OUT OF REACH OF CHILDREN

DANGER POISON

(See Outer Package for Complete Use and Handling Directions and Precautions Including Antidote Statement)

NET WT. 1-3/8 POUND

