

US ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF PESTICIDES PROGRAMS  
REGISTRATION DIVISION (TS-767)  
WASHINGTON, DC 20460

EPA REGISTRATION NO.

10163-180

DATE OF ISSUANCE

July 31, 1992

TERM OF ISSUANCE

1/1/1 Reregistration

NAME OF PESTICIDE PRODUCT

Gowan Azinphos 50 PVA

NOTICE OF PESTICIDE:  REGISTRATION  
 REREGISTRATION

(Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

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Gowan Company  
P. O. Box 5569  
Yuma, AZ 85366-5569

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NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(e)(7)(A) provided that you:

1. Submit data for the registration or other material required for registration/re-registration of your product under FIFRA sec. 3(c)(1) or FIFRA sec. 3(e) and the Agency requires all registrants of similar product to submit such data.
2. Add the phrase "EPA Registration No. 10163-180" to your label before you release the product for shipment.
3. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 3(e). Your release for shipment of the product constitutes acceptance of these conditions.

**BEST AVAILABLE COPY**

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

Dennis H. Edwards

DATE

7/31/92

A stamped copy of the label is enclosed for your records.

DHE

Dennis H. Edwards, Jr.  
Product Manager (19)  
Insecticide Rodenticide Branch  
Registration Division (H-7505C)

Enclosure

**BEST AVAILABLE COPY**

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**RESTRICTED USE PESTICIDE**  
Due To Acute Toxicity  
For retail sale to use only by certified applicators or person under their direct supervision and only for those uses covered by the Certified Applicator's Certification.

[REDACTED]

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

JUL 31 1992

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
10163-150

# GOWAN AZINPHOS 50 PVA

[REDACTED]

ACTIVE INGREDIENT	BY WT.
O,O-Dimethyl S-[(4-oxo-1,2,3-Benzotiazin-3 (4H)-yl) methyl] phosphorodithioate	50.0%
INERT INGREDIENTS	50.0%
	TOTAL 100.0%

**KEEP OUT OF REACH OF CHILDREN**



**DANGER-POISON  
PELIGRO**



**SEE BACK PANEL FOR ADDITIONAL PRECAUTIONS**

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado completamente

**STATEMENT OF PRACTICAL TREATMENT**

IF SWALLOWED — Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Repeat until vomit fluid is clear. Do not give anything by mouth to an unconscious person.

IF INHALED — Remove victim to fresh air. Apply artificial respiration if indicated.

IF IN EYES — Flush eyes with plenty of clear water for at least 15 minutes, and get medical attention if irritation persists.

IF ON SKIN — Remove contaminated clothing and wash skin immediately with soap and warm water.

**NOTE TO PHYSICIAN**

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. Azinphos-M 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.

**BEST AVAILABLE COPY**

**Net Weight 5 Pounds**

**Contains 5 one pound water soluble packages**

*Gowan Company*

4118

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**DANGER — POISON**

Fatal if swallowed, inhaled or absorbed through the skin. Do not breathe vapor, dust or spray mist. Do not get in eyes, on skin, or on clothing. Wash hands, arms and face thoroughly with soap and warm water before eating or smoking. Keep out of reach of children and domestic animals. Do not contaminate feed or foodstuffs. 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.

**Work Safety Rules:** 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.

**HANDLE 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 apron, 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 Health under the provisions 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, shoe coverings, or boots. Wear a chemical resistant hat during airblast application.

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 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 respirators. Personal clothing worn during use must be laundered separately from household articles. Clothing and protective equipment heavily contaminated or drenched with 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.

**Symptoms of Poisoning:** A sense of "tightness" in the chest. Sweating. Contracted pupils. Stomach pains, vomiting and diarrhea. **TREATMENT:** In case of poisoning, call a physician immediately. See Statement of Practical Treatment section of label.

**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 crops or blooming weeds. Do not apply this product or allow it to drift to crops or weeds when bees are actively visiting the treatment area. Time applications to provide the maximum possible interval between treatment and the next period of bee activity. Protective information may be obtained from your Cooperative Agricultural Extension Service.

**DIRECTIONS FOR USE**

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

**RE-ENTRY STATEMENT**

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 re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

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. 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 and oral warnings must include the following information: **DANGER — Area treated with Azinphos-M on (date of application).** Do not enter without appropriate protective clothing for 24 hours. In case of accidental exposure, follow instructions under Statement of Practical Treatment section.

**STORAGE AND DISPOSAL**

**STORE IN** a cool, dry place below 120°F. Do not store next to herbicides.

**DO NOT CONTAMINATE** water, food or feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or residue 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.

**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.

**CROP USE INSTRUCTIONS**

See attached booklet for application instructions.

**BEST AVAILABLE COPY**

Gowan Azinphos 50 PVA  
EPA Reg. No. 10163-

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(IN WATER SOLUBLE BAGS)

**DIRECTIONS FOR USE**

GOWAN COMPANY  
P.O. BOX 5569  
YUMA, AZ 85366

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

**DIRECTIONS FOR USE OF WATER SOLUBLE BAGS**

Packets containing Gowan Azinphos 50 PVA are water soluble. Do not allow packet to become wet prior to adding to the spray tank. Do not handle with wet hands. Reseal outer bag to protect remaining packets. To prepare the spray mixture, drop the required number of unopened packets, as determined under **RECOMMENDATIONS** into 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. Use the specified dosage of Gowan Azinphos 50 PVA 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 **RECOMMENDATIONS**. For each 1 pound of wettable powder to be added to the spray tank, use one 1 pound packet.

**SPRAYING**

Prepare water dilutions appropriate for type of equipment used as described in **DILUTION DIRECTIONS**. When applying, work to windward. Protect sprayer operators from drift or mist. 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.

**DILUTION DIRECTIONS**

The rate required for thorough, uniform coverage varies with plant growth at time of application. Except as specified for certain uses, the following rates are therefore intended to cover a broad range of applications.

**Dilute Application**

Field and Row Crops: Apply specified rate in 20 to 75 gallons of water per acre.

Trees and Vines: Apply specified rate in 100 to 800 gallons of water per acre. For citrus, use up to 2,000 gallons of water per acre.

**Concentrate Application**

Field and Row Crops: Apply specified rate in not less than 5 gallons of water per acre.

Trees and Vines: Apply specified rate in 20 to 100 gallons of water per acre.

Special concentrate equipment is required for these applications.

### Air Application

Field and Row Crops: Apply specified rate in a minimum of 3 gallons of water per acre. 118

Trees and Vines: Apply specified rate in a minimum of 10 gallons of water per acre. When tank mixing with other products, a premix is suggested to achieve a uniform suspension.

Unless specifically prohibited under a crop recommendation, application to all crops is allowed using ground or air equipment. Follow **DILUTION DIRECTIONS** above.

### ROTATIONAL CROPS

Do not plant root crops other than those with registered azinphos-methyl uses in azinphos-methyl treated soil sooner than 6 months after 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.

### GENERAL USE

#### PRECAUTIONS AND RESTRICTIONS

Do not use for any food or forage crop not listed on this labeling. Use only according to label directions. Application at rates above those shown may result in illegal crop residues.

**COMPATIBILITY:** Gowan Azinphos 50 **PVA** is compatible with many registered pesticides and liquid fertilizers. Do not combine with any products unless previous use of the mixture has proven physically compatible and safe to plants. When mixing Gowan Azinphos 50 **PVA** with any other product, add wettable powders or dry flowable formulations first and then add liquid products. If there is any separation, we recommend that combination not be used.

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

Gowan Azinphos 50 **PVA** is compatible with dormant and summer oils; these may be added to sprays in accordance with local recommendations.

Do not graze livestock in treated orchards or groves for 21 days after treatment. Where specific grazing restrictions are given for a crop listing, follow these specific directions. Do not treat food crops grown in the greenhouse.

### RECOMMENDATIONS

#### FIELD CROPS

**ALFALFA, CLOVER, BIRDSFOOT TREFOIL (East of the Mississippi River only)**

Leafhoppers: Use 1/2 to 1 lb. per acre. Alfalfa weevil, Egyptian alfalfa weevil: Use 3/4 to 1 1/2 lbs. per acre. Alfalfa plant bug, fleahopper, grasshoppers, lygus bugs, spittlebugs: Use 1 to 1 1/2 lbs. per acre. Apply specified dosage per acre by air or ground equipment. Use at least 10 gallons of water per acre 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 weevil with ground equipment. For application by irrigation systems, apply the 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 rates from 1/2 to 3/4 lb. per acre, or within 16 days of harvest at rates of 1 lb. per acre. Do not apply within 21 days of harvest at rates above 1 lb. per acre.

**BARLEY, OATS, RYE, WHEAT**

Cereal leaf beetle: Use 3/4 to 1 lb. 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.

**COTTON**

Bollweevil: Use 1/4 to 1/2 lb. per acre. Pink bollworm: Use 1 to 2 lbs. per acre. Brown cotton leafworm, cotton fleahopper, cotton leafworm, thrips: Use 1/2 lb. per acre. Rapid plant bug, tarnished plant bug: Use 1/2 to 1 lb. per acre. Apply by ground or air equipment in sufficient water for complete coverage, but not less than 5 gallons of water per acre. For early season control of pink bollworm, use 1 to 1 1/2 lbs., and for mid- to late-season applications, use 1 1/2 to 2 lbs. Repeat as necessary. Do not apply within 1 day of picking. Cotton receiving late-season applications should not be pastured.

**SOYBEANS**

Aphids\*, bean leaf beetle, green cloverworm, leafhoppers, leaf miners, leaf rollers, stink bugs, velvet bean caterpillar: Use 3/4 to 1 lb. per acre. Mexican bean beetle: Use 1 to 1 1/2 lbs. per acre. Apply in sufficient water for complete coverage. Repeat as necessary. Do not apply within 45 days of harvest. Do not graze or feed treated vines to livestock.

**TOBACCO**

Aphids\*, grasshoppers, tobacco hornworm, tobacco flea beetle: Use 1 to 1 1/2 lbs. per acre. Tobacco budworm: Use 1 1/2 lbs. per acre. Apply in sufficient water for complete coverage. Treat for hornworms as soon as egg masses or worms are first found. Repeat as necessary. Do not apply within 6 days of harvest. Prime before treating.

**FRUIT**

NOTE: When treating fruit during the bloom period, it is recommended that bee keepers be warned well in advance to remove hives a safe distance from orchards to be treated.

**APPLES, CRABAPPLES, PEARS, QUINCES**

Aphids\*, apple maggot, codling moth, European apple sawfly, eye-spotted bud moth, Forbes scale, fruittree leaf roller, green fruitworm\*, leafhoppers\*, mealybugs\*, orange tortrix, Oriental fruit moth, pear midge, pear psylla, plum curculio, Putnam scale, red-banded leaf roller, San Jose scale\*, stink bug, tarnished plant bug\*: Use 1 1/2 to 3 lbs. per acre (or Northeast and North Central states: 1/2 to 1 lb. per 100 gallons based on 300 gallons per acre.) Up to 12 lbs. may be applied per crop season. Allow at least 7 days between applications and 7 days between last application and harvest.

FOR AERIAL APPLICATIONS: Use 1 1/2 to 3 lbs. in a minimum of 3 gallons of water per acre for the Northwestern states and a minimum of 10 gallons of water per acre in other areas. Apply by fixed wing or helicopter aircraft. Where aphids are a problem, aerial applications may not provide satisfactory control. Up to 12 pounds of Gowan Azinphos 50 PVA may be applied per acre per crop season. Do not apply within 7 days of harvest and allow 7 days between applications.

Gowan Azinphos 50 PVA is compatible with dormant and summer oils, which may be added to apple and pear sprays in accordance with local recommendations.

**APRICOTS, NECTARINES, PEACHES (East of the Rocky Mountains)**

Aphids\*, cottony peach 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, red-banded leaf roller, San Jose scale\*, stink bug, tarnished plant bug\*, terrapin scale, thrips, walnut scale, white peach scale: Use 1 3/4 to 2 1/4 lbs. per acre (or 1/2 to 5/8 lb. per 100 gallons based on 300 gallons of water per acre.) Apply specified dosage per acre as a full coverage spray. Allow at least 14 days between applications. A total of 6 3/4 lbs. per acre per crop season may be applied to nectarines and a total of 9 lbs. per acre per crop season may be applied to apricots and peaches. Allow at least 21 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.

Gowan Azinphos 50 PVA is compatible with dormant and summer oils which may be added to peach sprays in accordance with local recommendations.

**APRICOTS, 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: Use 3 to 4 lbs. per acre. Allow at least 14 days between applications. A total of 6 3/4 lbs. per acre per crop season may be applied to nectarines and a total of 9 lbs. per acre per crop season may be applied to apricots and peaches. Allow at least 21 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.

Gowan Azinphos 50PVA is compatible with dormant and summer oils which may be added to peach sprays in accordance with local recommendations.

**CHERRIES**

Eye-spotted bud moth, Forbes scale, fruit flies, fruittree leaf roller, lesser peach tree borer, plum curculio, San Jose scale\*, cherry leaf miner, mineola moth: Use 1 1/2 lbs. per acre as a full coverage spray (or Northeast and North Central states: 1/2 pound per 100 gallons based on 300 gallons per acre.) Up to 6 lbs. per acre per crop season may be applied. Allow at least 14 days between applications and 15 days between last application and harvest. In California, apply post-harvest only.

**BLACKBERRIES, BOYSENBERRIES, LOGANBERRIES, RASPBERRIES**

Leafhoppers, leaf rollers: Use 1/2 lb. per acre. Leaf miners: Use 5/8 lb. per acre. Aphids\*: Use 5/8 to 1 lb. per acre. Obscure root weevil: Use 1 lb. per acre. Apply to foliage using sufficient water for good coverage. Do not apply within 14 days of harvest or more than twice per season.

Obscure root weevil: Use 1 lb. per acre. Raspberry crown (root) borer: Use 2 to 4 lbs. per acre. For root weevil and borer control prior to harvest, apply dosage to lower portion of canes and to the soil beneath the plants using sufficient water to cover. Do not apply more than twice per season. Do not apply within 3 days of harvest at rates up to 2 pounds per acre. Rates above 2 lb. per acre should only be applied before fruit set or after crop is harvested.



**BLUEBERRIES (East of the Rockies)**

Blueberry maggot, fruitworms, lecanium scale, plum curculio: Use 1 to 1 1/2 lbs. per acre. Apply specified dosage with aerial or ground equipment using sufficient water for good coverage. A total of 3 applications may be made per crop season regardless of rate or formulation used. Allow at least 10 days between applications and at least 7 days between last application and harvest.

**CITRUS FRUITS**

Aphids\*, black scale, brown soft scale, chaff scale, citricola scale, citrus thrips, citrus mealybug, citrus rootweevil complex, cottony-cushion scale, European brown snail, Florida red scale, fruit tree leaf roller, Fuller rose beetle, Glover scale, orange tortrix, snow scale, purple scale, western tussock moth, whiteflies: Use 4 to 6 lbs. per acre. California red scale, yellow scale: Apply 6 lbs. per acre. Apply specified dosage 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 trees (such as pruning) within 7 days after treatment.

**CRANBERRIES**

Cranberry fruitworm, Sparganothis sulfureana, tipworm: Use 1 to 2 lbs. per acre. Fireworms: Use 2 lbs. per acre. Apply specified dosage by air or ground equipment 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. 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 21 days between last application and harvest.

**GRAPES**

Grape berry moth, fleabeetles, grape cane girdlers, grape mealybug, leafhoppers\*, redbanded leaf roller, thrips, grape leaf skeletonizer: Use 1 1/2 to 2 lbs. per acre. 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.

**PLUMS, PRUNES (East of the Rockies)**

Aphids\*, codling moth, eye-spotted bud moth, Forbes scale, fruittree leaf roller, lesser peach tree borer, orange tortrix, peach tree borer, peach twig borer, plum curculio, redbanded leaf roller, San Jose scale\*, stink bug\*, tarnished plant bug\*, tussock moth: Use 1 3/4 to 2 1/2 lbs. per acre (or 1/2 to 5/8 lb. per 100 gallons based on 300 gallons per acre.) American plum borer: Use 3 lbs. per acre. Apply as a full coverage spray. A total of 6 3/4 lbs. may be applied per acre per crop season. 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. Cowan Azinphos 50 PV<sup>9</sup> is compatible with dormant and summer oils which may be added to prune sprays in accordance with local customs.

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**PLUMS, PRUNES (West of the Rockies)**

Codling moth, eye-spotted bud moth, fruit tree leafroller, lesser peach tree borer, orange tortrix, peach tree borer, peach twig borer, plum curculio, red-banded leafroller, stink bug, tarnished plant bug, tussock moth: Use 2 to 4 lbs. per acre. American plum borer: Use 3 to 4 lbs. per acre. Allow at least 10 days between applications and at least 15 days between last application and harvest. A total of 6 3/4 lbs. per acre per crop season may be applied to plums and prunes. For control of peach tree borer, apply 2 or 3 sprays to trunk from ground to scaffold limbs, timed with moth flight.

**STRAWBERRIES**

Aphids\*, meadow spittlebug, oblique-banded leaf roller, obscure root weevil, omnivorous leaf tier, pea leaf weevil, small black (grass) weevil, strawberry clipper, strawberry leaf roller, whitefly: Use 1 lb. per acre. Apply specified dosage as a full coverage spray 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. A total of 4 applications may be made per crop season regardless of rate or formulation used. Allow at least 5 days between applications and at least 5 days between last application and harvest.

**NUTS****ALMONDS**

Peach twig borer, navel orangeworm: Use 3 to 4 lbs. per acre. Apply specified dosage by concentrate sprayer or as a full coverage spray, using up to 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. Do not apply more than one dormant spray of 3 to 4 lbs. per acre per season. Make dormant treatment no later than January 1. Allow at least 120 days between the dormant spray and a first post-bloom spray of 3 to 4 lbs. per acre. Then, allow at least 28 days for either a subsequent spray of 3 to 4 lbs. per acre or else the first spray of a split application as recommended below:

**Split Application Spray Schedules**

#1: Apply 2 lbs. per acre at the onset of hullsplit. Follow 5 to 10 days later by a second 2 lb. treatment. Both applications must be made to achieve control.

**OR**

#2: Apply 4 lbs. per acre at the onset of hullsplit to every other row, followed 5 to 10 days later by a 4 lb. per acre spray to the alternate rows.

Do not apply more than a total of 4 lbs. of finished product (2# ai) per acre when using these split application schedule.

Note: To determine the onset of hullsplit, monitor nuts in the top of the canopy. Coverage is critical in the suture area. If splitting applications, be sure to apply both of the recommended treatments in the selected spray schedule. Do not make any application sooner than 28 days before harvest. Do not graze livestock in treated orchards for 21 days after treatment.

**FILBERTS (Pacific Northwest Only)**

Apple mealybug, filbert worm, filbert aphid, filbert leaf roller: Use 3 to 4 lbs. per acre. Apply specified dosage 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.

#### **PECANS**

Aphids\*, fall webworm, hickory shuckworm, leaf miners, May beetles, pecan casebearer, southern green stink bug, spittlebugs, twig girdlers, walnut caterpillars: Use 3 to 4 lbs. per acre. Apply specified dosage 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 applications. Do not apply after shuck split. Do not graze livestock in treated groves for 21 days after treatment.

#### **PISTACHIOS (CALIFORNIA ONLY)**

Navel Orangeworm: Apply 5 lbs. per acre as a full coverage spray, using not more than 500 gallons of finished spray per acre. Make one application from bud break to 10% hullsplit. Do not apply within 21 days of harvest. Do not graze livestock in treated orchards for 21 days after treatment.

#### **WALNUTS**

Codling moth, filbert worm, navel orangeworm, peach twig borer walnut husk fly, red-humped caterpillar: Use 2 to 4 lbs. per acre. Apply specified dosage as a full coverage spray. Do not apply after husks split. A split application may be necessary for thorough coverage. If a split application is used, apply 2 lbs. per acre using ground equipment to be followed no later than 5 days after by a ground or aerial treatment of 2 lbs. per acre. Allow at least 14 days between the first and the split applications. Do not exceed a total of 12 lbs. Gowan Azinphos 50 PVA per acre per crop season. Do not graze livestock in treated groves for 21 days after treatment.

### **VEGETABLES**

#### **ARTICHOKES**

Plume moth: Use 3 lbs. 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 3 applications may be made per crop season regardless of rate, formulation, or method of application used. Allow at least 14 days between applications and at least 30 days between last application and harvest. Do not feed or ensile treated forage.

#### **BEANS (DRY & SNAP)**

Leaf rollers: Use 1/2 to 1 lb. per acre. Aphids\*, bean leafbeetle, green cloverworm, leafhoppers, leaf miners, stink bugs, velvet bean caterpillar: Use 3/4 to 1 lb. per acre. Mexican bean beetle, spotted cucumber beetle, striped cucumber beetle, tarnished plant bug, western-striped cucumber beetle: Use 1 lb. per acre. Apply specified dosage in sufficient water for thorough coverage. Do not apply to snap beans within 7 days of harvest nor to dry beans within 30 days of harvest. Do not exceed 4 applications. Do not feed or ensile treated forage.

#### **BLACKEYED PEAS (SOUTHERN PEAS, CROWDER PEAS)**

Corn earworm, cowpea curculio: Use 1 1/2 to 2 lbs. per acre. Leaf miners, stink bugs: Use 3/4 to 1 lb. per acre. Apply in sufficient water for complete coverage. Do not apply more than 4 times per season. Do not apply within 7 days of harvest. Do not use treated vines for feed or forage nor pasture treated areas.

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**BROCCOLI, BRUSSELS SPROUTS, CABBAGE (INCLUDES TIGHT HEADING VARIETIES OF CHINESE CABBAGE), CAULIFLOWER**

Aphids\*, cabbage looper, diamondback moth, imported cabbageworm: Use 1 to 1 1/2 lbs. per acre. Apply specified dosage in sufficient water for complete coverage. Do not apply within 7 days of harvest for brussels sprouts, 15 days of harvest for broccoli and cauliflower, and 21 days of harvest for cabbage. Do not exceed more than 3 applications per season. Cabbage maggot: Use 1/4 to 3/8 lbs. per acre. 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): Use 1 1/2 lbs. per acre. Apply specified dosage in sufficient water for uniform distribution. Mix in upper 2 inches of soil prior to seeding or spray in the seed row at planting time. Usually 2-3 additional sprays are necessary during the growing season, depending on time of year and maggot populations. Do not apply within 21 days of harvest. Do not exceed more than 3 applications per season.

Cabbage maggot (transplant fields in California only): Use 1 1/2 lbs. in 300 to 400 gallons of water per acre as a soil drench in rows when damage first appears. Additional applications may be necessary. Do not apply within 21 days of harvest. Do not exceed more than 3 applications per season.

**CELERY**

Aphids\*, leaf miners, leafhoppers, spittlebug, tarnished plant bug\*: Use 1 lb. in 100 gallons of water as a full coverage\*\* using not more than 200 gallons of finished spray per acre. Repeat as necessary. Do not apply within 14 days of harvest. Do not exceed more than 3 applications per season.

**CUCUMBERS**

Spotted cucumber beetles, striped cucumber beetle, western-striped cucumber beetle: Apply 1 lb. per acre in sufficient water for complete coverage. Do not apply within 1 day of harvest. Allow at least 7 days between applications. 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.

**EGGPLANT**

Leaf miners: Use 3/4 to 1 lb. per acre. European corn borer, flea beetles: Use 1 lb. per acre. Apply in sufficient water for complete coverage. Repeat as necessary but do not exceed 3 applications per crop season regardless of rate, formulation, or method of application used and allow at least 7 days between applications. For application by irrigation systems, apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label. Do not apply after fruit set.

**ONIONS (GREEN AND DRY)**

Thrips: Use 1 to 1 1/2 lbs. per acre. Apply 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. Do not apply more than 3 times per crop season. Allow at least 7 days between applications for dry bulb onions and at least 10 days between applications for green onions. Do not apply within 28 days of harvest for dry onions nor within 7 days of harvest for green onions.

## PEPPERS

Leaf miners: Use 3/4 to 1 lb. per acre. European corn borers, flea beetles: Use 1 lb. per acre. Apply in sufficient water for thorough 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 can be made per crop season. Allow at least 7 days between applications and 7 days between last application and harvest.

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## POTATOES

Colorado potato beetle\*: Use 3/4 lb. per acre. Banded cucumber beetle, leaf miners: Use 3/4 to 1 lb. per acre. European corn borer, flea beetle, leafhopper, spittlebug, tarnished plant bug: Use 1 to 1 1/2 lbs. per acre. Tuberworm: Use 1 1/8 to 1 1/2 lbs. per acre. Apply 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 application method used. Allow at least 7 days between application and 7 days between last application and harvest.

## SPINACH

Aphids\*, leaf miners, mites\*: Use 3/4 to 1 lb. per acre in sufficient water for complete coverage. Do not exceed more than 3 applications per season nor apply within 14 days of harvest.

## TOMATOES

Colorado potato beetle\*: Use 3/4 lb. per acre. Banded cucumber beetle, *Drosophila*, green stink bug, leaf miners, whitefly: Use 3/4 to 1 lb. per acre. Aphids\*, European corn borer, flea beetles, grasshoppers, leafhoppers, thrips: Use 1 to 1 1/2 lbs. per acre. Tuberworm: Use 1 1/8 to 1 1/2 lbs. per acre. Corn earworm, fruitworm, pinworm, yellow-striped armyworm, hornworm: Use 1 1/2 to 3 lbs. per acre. Apply in sufficient water for complete coverage. A total of 4 applications may be made per crop season regardless of rate, formulation, or method of application used. Allow at least 7 days between applications. The high rates should be used where heavy infestations of late instar lepidopterous larvae (large worms) and pinworms are present. Rates of 1 1/2 lbs. per acre or less may be applied up to day of harvest. Rates above 1 1/2 lbs. per acre require an interval of 14 days between last application and harvest. For application by irrigation systems, apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.

## MELONS (HONEYDEW MELONS, MUSKMELON (CANTALOUPE), WATERMELONS, AND OTHER MELONS

Leafhoppers, leaf miners: Use 3/4 to 1 lb. per acre. Rindworms, spotted cucumber beetle, striped cucumber beetle, western-striped cucumber beetle: Use 1 lb. per acre. Apply in sufficient water for complete coverage. A total of 3 applications may be made per crop season. Allow at least 5 days between applications and at least 7 days between last application and harvest. For application by irrigation systems, apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.

## ORNAMENTALS

### SOUTHERN PINE SEED ORCHARDS

Coneworm, seedworm: Use 4 lbs. per 100 gallons of water (.2% dilution) as a full coverage spray.\*\* Use 2.25 lbs. 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 application (at least 30 days apart). Apply approximately 5 to 10 gallons of the .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.

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#### ORNAMENTALS, NURSERY PLANTS, SHADE TREES

Aphids, Cerococcus scale, euonymus scale, juniper scale, lace bugs, leafhoppers, mites, olive scale, oystershell scale, Pulvinaria scale, thrips: Use 3/4 to 1 lb. Brown soft scale, Putnam scale: Use 2 lbs. Black pine leaf scale, European elm scale: Use 1 1/2 to 2 lbs. Apply specified dosage per 100 gallons of water. Spray all foliage surfaces including undersides of leaves complete coverage. For control of black pine leaf, brown soft, European elm and Putnam scales, use the higher rate. Repeat as necessary. Cone midge, Cone moth: Use 4 to 8 lbs. Apply specified dosage per 100 gallons of water. Time applications to coincide with moth flight when cones are open for pollination. Thorough coverage is necessary for maximum control. Repeat as necessary. European pine shoot moth, Nantucket pine tip moth: Use 3/4 to 1 1/2 lbs. per acre in sufficient water for good coverage. Time applications to coincide with moth flights. NOTE: 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.

#### CHRISTMAS TREES

Scale spp., sawfly spp., European pine shoot moth, eastern pine shoot borer, Nantucket pine tip moth: Use 3/4 to 1 1/2 lbs. per acre in sufficient water to give complete coverage but not less than 1 gallon per acre. Time applications to coincide with susceptible pest development.

\*In some areas, these species may have developed resistance to organophosphate insecticides. Gowan Azinphos 50 PVA used alone may not provide satisfactory control in those areas. Consult your local agricultural advisor or cooperative extension service for recommendations.

\*\*This dosage is calculated for conventional hydraulic type sprayers. When lower volumes of spray are applied per acre with concentrate sprayers, increase the concentration of Gowan Azinphos 50 PVA in the spray mixture in order to apply amount of product per acre equivalent to a full coverage spray.

See DILUTION DIRECTIONS for water dilution guidelines.

## GENERAL CHEMIGATION INSTRUCTIONS

Gowan Azinphos 50 PVA may be applied through recommended types of irrigation systems to many crops. If application by Chemigation is not listed in the remarks section for a crop, Gowan Azinphos 50 PVA may not be applied to that crop through irrigation systems. 15/18

Apply this product only through sprinkler, including center pivot, lateral move, side roll, overhead solid set, or low pressure sprinkler irrigation systems. Do not apply this product through any other type of irrigation system.

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 specialists, equipment manufacturers, or other experts.

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.

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

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

### REQUIRED SAFETY SYSTEM DEVICES

The system must contain a functional check valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

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 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 injections 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 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.

### USING WATER FROM PUBLIC WATER SYSTEMS

DO NOT APPLY GOWAN AZINPHOS 50 PVA THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least two service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Gowan Azinphos 50 PVA may be applied through any of the recommended types of irrigation systems which may be supplied by a public water system only if 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 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, or in cases where there is not a 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

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 location affording maximum visibility to the sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. 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.

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

For application of Gowan Azinphos 50 PVA alone, a chemical supply tank is necessary for premixing. For application of Gowan Azinphos 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.

When a chemical supply tank is used, you must determine the required amounts of Gowan Azinphos 50 PVA to mix in the tank.

The amount of Gowan Azinphos 50 PVA needed equals the number of pounds of Gowan Azinphos 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 product per acre to 130 acres in 20 hours and your injection pump delivers 15 gallons per hour, you need: 2 pounds of Gowan Azinphos 50 PVA per acre X 130 acres = 260 pounds of Gowan Azinphos 50 PVA And, you need: 15 gallons per hour X 20 hours = 300 gallons of suspension = 300 gallons of water.

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.

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.

## SPRINKLER IRRIGATION SYSTEMS

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All directions and requirements under the GENERAL DIRECTIONS must be followed for sprinkler irrigation systems.

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In addition, the following directions apply to sprinkler irrigation systems:

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

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 continuously 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. For a soil application, the system should be run at a slower speed with application in at least 1/4 inch of water.

### Solid Set and Manually Controlled Linear Systems

For foliar application, injection should be during the last 30 to 60 minutes of regular irrigation period or as a separate 30 to 60 minute application not associated with a regular irrigation. For soil treatment, application should be in at least 1/4 inch of water. Do not use end guns.