

5481-476

9/20/2011

10427



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

SEP 20 2011

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Joy Paff
Regulatory Specialist
Amvac Chemicals Corporation
4695 MacArthur Court, Suite 1250
Newport Beach, CA 92660

RE: Product Name: Amvac AZA 3% EC
EPA Reg. No: 5481-476
Application for Label Notification Dated August 12, 2011 to update the storage
and disposal statement per PR Notice 2007-4

Dear Mrs. Paff:

The Biopesticides and Pollution Prevention Division is in receipt of your application for Notification under Pesticide Registration (PR) Notice 98-10 dated above. A preliminary screen of this request has been conducted for its applicability under PR Notice 98-10 and it has been determined that the action(s) requested falls within the scope of PR Notice 98-10. Our records have been duly noted, and the label submitted with this application has been stamped "Notification Accepted" and will be placed accordingly in our records.

If you have any questions concerning this action, please feel free to contact Ms. Menyon Adams at (703) 347-8496 or email at adams.menyon@epa.gov.

Sincerely,

Linda Hollis

Linda Hollis, Chief
Biochemical Pesticides Branch
Biopesticides and Pollution Prevention
Division (7511P)

30A27



United States Environmental Protection Agency Washington, DC 20460

- Registration
Amendment
Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number: 5481-476
2. EPA Product Manager
3. Proposed Classification: [X] None [] Restricted
4. Company/Product (Name): Ornazin 3% EC
5. Name and Address of Applicant: Amvac Chemical Corporation, 4695 MacArthur Court, Suite 1250, Newport Beach, CA 92660
6. Expedited Review: EPA Reg. No. ---, Product Name ---

Notification Accepted

Section - II

- Amendment - Explain below
Resubmission in response to Agency letter dated
Notification - Explain below
Final printed labels in response to Agency letter dated
"Me Too" Application
Other - Explain below

Reviewer: M. Adams, SEP 20 2011

Explanation: Use additional page(s) if necessary. (For Section I and Section II.) Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156.

Section - III

1. Material This Product Will Be Packaged In: Child-Resistant Packaging, Unit Packaging, Water Soluble Packaging, 2. Type of Container, 3. Location of Net Contents Information, 4. Size(s) Retail Container, 5. Location of Label Directions, 6. Manner in Which Label is Affixed to Product

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.) Name: Joy Paff, Title: Regulatory Specialist, Telephone No.: 949-221-6123
Certification: I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete.
2. Signature: Joy Paff, 3. Title: Regulatory Specialist, 4. Typed Name: Joy Paff, 5. Date: August 12, 2011, 8. Date Application Received (Stamped)



4027

August 12, 2011

Ms. Sherada Hobgood
Document Processing Desk
Office of Pesticide Programs (Notif)
U.S. Environmental Protection Agency
One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

**Subject: Notification of Storage and Disposal Statement Per PR Notice 2007-4
Ampac AZA 3% EC and ABN Ornazin 3% EC (EPA Reg. No. 5481-476)**

Dear Sherada:

In accordance with PR Notice 2007-4, please find enclosed the notification to revise labeling for the above listed products. We have updated the Storage and Disposal Statement to comply with the language outlined in the Agency's PR Notice.

In support of this request, enclosed please find the following:

1. Application for Pesticide Registration (EPA Form 8570-1 – one for each product).
2. Three copies of each label (Ref. No. 476-20110812r5).
3. One copy of each label with changes highlighted

It is my understanding that this satisfies the requirements of the Agency's PR Notice and will require no further action. If you have any questions or require additional information, please do not hesitate to contact me at 949-221-6123 or email joyp@amvac-chemical.com. Thank you for your attention to this matter.

Best regards,

Joy Paff
Regulatory Specialist

50927

AMVAC AZA 3% EC*

BOTANICAL INSECTICIDE / NEMATICIDE

*Patent-Pending Formulation

For use on turfgrass, outdoor shrubs, trees, and ornamentals
For ornamental greenhouses, shadehouses, interiorscapes and nursery use
For mushroom house use
For use on outdoor food crops

For controlling and repelling insects such as aphids, armyworms, beetles, budworms, cutworms, fungus gnats, leafhoppers, leafminers, loopers, leafrollers, and other lepidopterous larvae, mealybugs, mushroom flies or sciarid flies, sawflies, scales, thrips, webworms, weevils, whiteflies; and plant parasitic nematodes such as burrowing, dagger, golden, and root knot nematodes.

ACTIVE INGREDIENT:	By Weight
Azadirachtin.....	3.0%
INERT INGREDIENTS:	<u>97.0%</u>
TOTAL	100.0%

Contains 0.27 lb. (121 grams) of azadirachtin per gallon.

KEEP OUT OF REACH OF CHILDREN

WARNING — AVISO

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

FIRST AID	
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:	
Transportation: CHEMTREC.....1-800-424-9300	
Other: AMVAC.....1-323-264-3910	

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-476
EPA Est. No. 5481-CA-1

Net Contents: 1 QUART
Lot Number _____



4100 E. Washington Blvd.
Los Angeles, CA 90023 U.S.A
1-323-264-3910 • www.amvac-chemical.com

Notification Accepted

Date: SEP 20 2011

Reviewer: M. Adams

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING: Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear long-sleeved shirt and long pants, socks and shoes, and goggles or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- chemical-resistant (such as barrier laminate, butyl, nitrile, neoprene, polyvinyl chloride, or viton) gloves
- goggles or face shield
- socks and shoes

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

User Safety Recommendations

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not apply this product through any irrigation system unless the chemigation instructions on this label are followed. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Do not enter or allow entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls over long-sleeved shirt and long pants; goggles or face shield; waterproof gloves, and socks and chemical-resistant footwear.

NON-AGRICULTURAL USE REQUIREMENTS

These requirements apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR, part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. For other uses including golf courses and other non-agricultural uses, do not enter treated areas without protective clothing until sprays have dried.

PRODUCT DESCRIPTION

AMVAC AZA 3% EC is an emulsifiable concentrate containing 3.0% by weight azadirachtin. It has been evaluated on a wide variety of ornamental, forestry, and food crops. No phytotoxicity at recommended field rates have been observed. AMVAC AZA 3% EC is an insect growth regulator and does not control adult insects. However, AMVAC AZA 3% EC is also effective as a repellent towards some adult species as detailed below. AMVAC AZA 3% EC is an effective resistance management tool when used in an Integrated Pest Management (IPM) spray program.

Mode of Action

AMVAC AZA 3% EC controls insects in the larval, pupal, and nymphal stages by interfering with the metabolism of ecdysone. Insects typically die during larval eclosion and between larval to larval, larval to pupal, nymph to nymph molts, or during adult eclosion.

Compatibility

AMVAC AZA 3% EC has been found to be compatible with the most commonly used insecticides, fungicides and fertilizers. Compatibility should be checked by using the correct proportion of the products in a small test container. Growers should then test the tank-mix combinations for possible adverse effects (such as settling out, flocculation, etc.) and for phytotoxic effects on a small sample of plants prior to use. As environmental conditions can alter the interactions between compounds, a compatibility test is recommended for both new and previously used combinations. Avoid mixtures of several materials and very concentrated spray mixtures.

Do not use AMVAC AZA 3% EC with Bordeaux mixture, triphenyltin hydroxide, lime sulfur, Rayplex iron or other highly alkaline materials. Use mildly alkaline mixtures immediately after mixing to prevent loss of insecticidal activity.

When using AMVAC AZA 3% EC in combination with other products, use AMVAC AZA 3% EC at the rate, or half the rate, specified in the Use Rate Recommendation Table. Follow the directions for use, precautions and limitations for use on all of the product labels used in the combination. Some suggested tank mix combinations are as follows:

- AMVAC AZA 3% EC plus non-phytotoxic oil*
- AMVAC AZA 3% EC plus endosulfan*
- AMVAC AZA 3% EC plus chlorpyrifos*
- AMVAC AZA 3% EC plus acephate*
- AMVAC AZA 3% EC plus *Bacillus thuringiensis** (BT)
- AMVAC AZA 3% EC plus bifenthrin*
- AMVAC AZA 3% EC plus esfenvalerate*
- AMVAC AZA 3% EC plus abamectin*
- AMVAC AZA 3% EC plus diflubenzuron*
- AMVAC AZA 3% EC plus pyrethrum+piperonyl butoxide (for fogging use)*

* Always follow the manufacturer's Directions for Use and Precautionary Statements.

APPLICATION INSTRUCTIONS

READ ALL DIRECTIONS AND PRECAUTIONS BEFORE USE. AMVAC AZA 3% EC is exempt from tolerances and may be applied as directed to any food or non-food crop up to and including the day of harvest at a rate not exceeding 22.5 fl. oz. (20 grams active ingredient) per acre per application.

Mixing

Shake well before mixing. Always use this product promptly after mixing with water. AMVAC AZA 3% EC will break down in the spray solution if not used within 8 hours. Never allow tank mix to stand overnight. AMVAC AZA 3% EC will break down in spray tank mixtures that have pH values exceeding 7.0. The recommended pH range is between 5.5 and 6.5. For optimum performance, a buffering agent may be used. When mixing with other approved agrichemicals, always ensure proper agitation in the spray tank to ensure uniform application.

From the use rates chart, determine the amount of AMVAC AZA 3% EC required for the number of acres to be treated. To a clean spray tank, add at least one-half the water to be sprayed. Begin agitation and add the determined amount of AMVAC AZA 3% EC. Add the remaining water and continue agitation.

AMVAC AZA 3% EC disperses freely when added to water. Always use clean equipment. For uniform distribution on plant canopy and proper dilution, always ensure proper agitation in mixing tanks or vessels. When mixing with other agrichemicals, add solid constituents (such as wettable powders, water dispersible granules or micronutrients) last in the form of a slurry.

Application Method and Equipment

AMVAC AZA 3% EC can be applied as a foliar spray or a drench to soil or non-soil media (e.g., greenhouses and mushroom houses) to control insects and nematodes. When needed, soil drenches can also be used to control soil-borne pests including soil-borne larvae of foliar insect pests. When applying as a drench, avoid excessive leaching. AMVAC AZA 3% EC can also be applied through sub-surface soil treatment equipment (e.g. turfgrass). AMVAC AZA 3% EC can also be injected into mature trees (landscaping, forestry, residential, etc.) using appropriate tree injection equipment. To repel adults, apply through fogging equipment. Always follow equipment manufacturer's Use Directions.

AMVAC AZA 3% EC may be applied using any powered or manual pesticide application equipment which includes, but is not restricted to, high-volume, low-volume, ultra-low volume, aerial, electrostatic, fogging, and chemigation. Follow the original manufacturer's recommendations when using these types of equipment.

For optimum results, two applications made at 7 to 10 day intervals are recommended unless otherwise specified. Foliar applications should be made to both sides of leaves. In addition, a surfactant used per the manufacturer's recommendations may improve product performance. The addition of a non-phytotoxic oil at rates not exceeding 1.0% (volume/volume) generally enhances insect control by providing longer residual activity and penetration into plant tissue. However on sensitive plants, addition of oil is not necessary.

USE RATES RECOMMENDATIONS

AMVAC AZA 3% EC is intended for use on outdoor plants and food crops, mushroom houses, plants grown indoors or in greenhouses, shadehouses, interiorscapes and nurseries. It can be used to control any of the following insects and nematodes.

Use the table below to determine the appropriate use rate for your site/pest combination. Rates are provided in ounces of AMVAC AZA 3% EC per area or row length. When infestation is heavy or when plant canopy is dense, AMVAC AZA 3% EC may be used at a rate up to twice (2x) that shown in the table below, not to exceed 22.5 oz/acre. When combining with other insecticides, use half the recommended rate of AMVAC AZA 3% EC.

AMVAC AZA 3% EC can be injected into mature trees (landscaping, forestry, residential, etc.) using appropriate tree injection equipment. Inject at the rate of 0.15 to 0.20 fl. oz. per inch tree trunk diameter, and repeat application if needed. DO NOT exceed 22.5 fl. oz. per acre per application.

USE RATES FOR OUTDOOR PLANTS INCLUDING FOOD CROPS, TREES, TURFGRASS, NURSERY AND ALL OUTDOOR ORNAMENTAL PLANTS.

PEST	RATE ¹ (oz/acre)	RECOMMENDATIONS
APHIDS , such as: Apple aphids, Cabbage aphids, Cotton aphids, Green Peach aphids, Pea aphids, Phylloxera, Potato aphids, Rose aphids	10	Spray when pests first appear. For food crops: Repeat application after 7-10 days. Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves. For non-food crops: Repeat application every 5 to 7 days.
BETTERLES , such as: Bark beetles, Blueberry Flea beetles, Boll weevils, Colorado Potato beetles, Flea beetles, Japanese beetles, Leaf beetles, Mexican Bean beetles, Pepper weevils, Plum curculio, Rose chafers, Twig girdlers	8	Spray when pests first appear. For food crops: Repeat application after 7-10 days. Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves. Oil not required for adult Japanese beetle repellency. For non-food crops: Repeat application every 5 to 7 days.
BORERS , such as: Dogwood borers, Cranberry borers, girdlers, Peachtree borers, Peach Twig borers	10	Spray soon after egg hatch. For food crops: Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves.
BUGS , such as: Boxelder bugs, Chinch bugs, Lygus bugs, Spittle bugs, Stink bugs	10	Spray nymphs early.
CATERPILLARS , such as: Armyworms, Artichoke Plume moths, Bagworms, Bollworms, Budworms, Cabbage Butterflies, Cabbage Loopers, Cankerworms, Casebearers, Caseworms, Corn earworms, Cutworms, Diamond Back moths, Fireworms, Fruitworms, Grapeleaf skeletonizers, Green fruitworms (<i>Lacanobia</i>), Gypsy moths, Hickory shuckworms, Hornworms, Imported Cabbage worms, Leaf perforators, Leafrollers, Melonworms, Navel Orange worms, Oblique-banded leafrollers, Omnivorous leafrollers, Oriental fruit moths, Pandemis leafrollers, Pickleworms, Pine Tip moths, Pinworms, Red-banded leafrollers, Sod webworms, Soybean loopers, Spanworms, Tent caterpillars, Tobacco budworms, Tussock moths	8	Spray when pests first appear. For food crops: Repeat application after 7-10 days. Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves. For non-food crops: Repeat application every 5 to 7 days.
FLIES , such as: Blueberry maggots, Cherry maggots, Crane flies, Fruit flies, Midges, Onion maggots, Tipworms, Walnut Husk flies	10	For food crops: Spray when pests first appear. Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves. For non-food crops: Drench soil to kill larvae.

USE RATES FOR OUTDOOR PLANTS INCLUDING FOOD CROPS, TREES, TURFGRASS, NURSERY AND ALL OUTDOOR ORNAMENTAL PLANTS.

PEST	RATE ¹ (oz/acre)	RECOMMENDATIONS
LEAFHOPPERS , such as: Apple leafhoppers, Beet leafhoppers, Grape leafhoppers, Potato leafhoppers, Variegated leafhoppers	10	Spray when pests first appear. For food crops: Repeat application after 7-10 days. Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover underside of leaves. For non-food crops: Repeat application every 5 to 7 days.
LEAFMINERS , such as: Azalea leafminers, Birch leafminers, Citrus leafminers, Serpentine leafminers, Vegetable leafminers, Western Tentiform leafminers	10	Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves.
MEALYBUGS , such as: Apple mealybugs, Citrus mealybugs, Grape mealybugs	10	Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover twigs and leaves.
MOLE CRICKETS	10	Spray nymphs soon after egg hatch.
NEMATODES , such as: Burrowing nematodes, Dagger nematodes, Golden nematodes, Root Knot nematodes	15	Apply in sufficient amount of water to penetrate in the soil to a depth of 12 inches. Repeat applications every 3 or 4 weeks or as needed.
PSYLLIDS , such as: Pear psylla	8	Spray when pests first appear. For food crops: Repeat application after 7-10 days. Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves. For non-food crops: Repeat application every 5 to 7 days.
SAWFLIES , such as: European Pine sawflies, Pear sawflies, Red-Headed Pine sawflies, Yellow-Headed Pine sawflies	10	Treat larvae early.
SCALES , such as: Black scales, Brown Soft scales, California Red scales, Coffee scales, Olive scales, San Jose scales	10	Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover twigs and leaves.
THRIPS , such as: Citrus thrips, Onion thrips, <i>Thrips palmi</i> , Western Flower thrips	10	Spray when pests first appear. Repeat every 5 to 7 days.
WEEVILS , such as: Black Vine weevils, Pepper weevils, Rice weevils, Strawberry Vine weevils	10	Make foliar applications to deter adult feeding. Make soil drench applications during spring and fall periods to control larvae. Make at least 3 to 4 applications 10 days apart.
WHITEFLIES , such as: Greenhouse whiteflies, Silverleaf whiteflies, Woolly whiteflies	8	Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves.

1 When infestation is heavy, or when plant canopy is dense, AMVAC AZA 3% EC may be used at a rate up to twice (2x) that shown in the above table, not to exceed 22.5 oz/acre. When combining with other insecticides, half the rate of AMVAC AZA 3% EC is recommended.

USE RATES FOR MUSHROOMS.		
PEST	RATE ¹ (oz/1,000 sq. ft.)	RECOMMENDATIONS
Mushroom flies or sciarid flies, Phorid flies, Nematodes	0.5	Apply as drench to the casing layer, media or compost. Make at least 4 to 5 applications 7 to 10 days apart. To repel adults, apply with fogging equipment at first sign of activity. For Mushroom House Use: Mix into the casing layer, or into media during the spawn run. Can be applied between breaks until the final flush. For Specialty Mushrooms: Can be diluted at the rate of 8 oz/50 gallons and sprayed or drenched on logs or media.

¹ Do not exceed 0.5 oz. AMVAC AZA 3% EC per 1,000 square feet, or 22.5 oz. per acre per application.

FOR USE INDOORS OR IN GREENHOUSES

Use the table below to determine the appropriate use rate for each pest. Foliar sprays for individual plants should thoroughly wet both sides of the leaves without causing runoff. Mix spray solution according to use rates and recommendations below. For the treatment of small areas, add 1.0 oz AMVAC AZA 3% EC to 10 gallons of water. One gallon of finished spray will treat 500 square feet. When used as a drench, apply one pint of finished spray for each gallon of soil in the pot. For large areas, use 100 to 200 gallons of finished spray per acre. Do not exceed 22.5 oz of AMVAC AZA 3% EC per acre per application.

USE RATES FOR ANY PLANTS GROWN INDOORS OR IN GREENHOUSES, SHADEHOUSES, INTERIORSCAPES, AND NURSERIES.		
PEST	RATE ¹ (oz/100 gallons)	RECOMMENDATIONS
APHIDS , such as: Green Peach aphids, Pea aphids, Cotton aphids, Rose aphids	8	Spray when pests first appear. Addition of 0.5-1.0% non-phytotoxic oil will enhance efficacy.
BETLES , such as: Bark beetles, Flea beetles, Japanese beetles, Leaf beetles	10	Spray when pests first appear. Repeat as needed.
BORERS , such as: Peachtree borers, Peach Twig borers	10	Spray when pests first appear. Repeat as needed.
CATERPILLARS , such as: Armyworms, Bagworms, Cutworms, Leafrollers, Loopers, Spruce Budworms, Webworms	8	Spray when pests first appear.
FLIES , such as: Crane flies, Fungus gnats, Shore flies	8	Add at least 1 pint of mixture per gallon pot as soil drench. Repeat application every 7 days for 3 weeks. For poinsettias, lilies and bedding plants also make one application 10 to 15 days prior to shipping plants to prevent adult emergence.

USE RATES FOR ANY PLANTS GROWN INDOORS OR IN GREENHOUSES, SHADEHOUSES, INTERIORSCAPES, AND NURSERIES.

PEST	RATE ¹ (oz/100 gallons)	RECOMMENDATIONS
LACEWINGS , such as: Azalea lacewings	8	Spray when pests first appear. Addition of 0.5-1.0% non-phytotoxic oil will enhance efficacy.
LEAFHOPPERS , such as: Grape leafhoppers, Potato leafhoppers	10	Spray when pests first appear. For food crops: Repeat application after 7-10 days. Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover underside of leaves. For non-food crops: Repeat application every 5 to 7 days.
LEAFMINERS , such as: Serpentine leafminers	10	Spray early. Make 2 applications in rotation with adulticides such as pyrethroids.
MEALYBUGS	8	Use in combination with 0.5-1.0% non-phytotoxic oil.
NEMATODES , such as: Burrowing nematodes, Dagger nematodes, Golden nematodes, Root Knot nematodes	8	Drench at least 1 pint of mixture per gallon pot once a week for 4 weeks. Avoid leaching-drench until moist to the touch. For heavy infestations, use the higher rate and drench more frequently.
SOFT SCALES	10	Use in combination with 0.5-1.0% non-phytotoxic oil in sufficient water to cover twigs and leaves.
THRIPS , such as: Western Flower thrips	8	Spray when pests first appear. Repeat every 5 to 7 days.
WEEVILS , such as: Black Vine weevils, Strawberry Vine weevils	8	Make foliar applications to deter adult feeding. Make soil drench applications during spring and fall periods to control larvae. Make at least 3 to 4 applications 10 days apart.
WHITEFLIES , such as: Greenhouse whiteflies, Silverleaf whiteflies	10	Ensure good coverage to top and bottom of leaves against larvae and pupae. Can be applied after bract formation on poinsettias. (Test for phytotoxicity prior to large-scale use.)

¹ When infestation is heavy, or when plant canopy is dense, AMVAC AZA 3% EC may be used at a rate up to twice (2x) that shown in the above table, not to exceed 22.5 oz/acre. When combining with other insecticides, half the rate of AMVAC AZA 3% EC is recommended.

USE SITES

AMVAC AZA 3% EC can be used on:

GREENHOUSE FOOD CROPS, such as: *brassica* (cole) crops, cucurbits, eggplants, herbs and spices, legumes, peppers, tomatoes, and other miscellaneous crops grown in greenhouses.

MUSHROOMS, such as: *Agaricus*, enoki, maitake, oyster, shiitake and other specialty mushrooms.

FOOD CROPS including:

Berries, such as: blackberries and caneberries, blueberries, cranberries, currants, elderberries, gooseberries, grapes, huckleberries, loganberries, raspberries, strawberries, youngberries.

Bulb Vegetables, such as: garlic, leek, onion, shallot.

Cereal Grains, such as: barley, buckwheat, corn, millet, oats, popcorn, rice, rye, sorghum, teosintes, triticale hybrids, wheat, wild rice.

Citrus Fruits, such as: calamondins, citrus citrons, citrus hybrids, grapefruits, kumquats, lemons, limes, mandarins, oranges, pummellos, Satsuma mandarins.

Cucurbit Vegetables, such as: bitter melons, Chayotes, Chinese wax gourds, citron melons, cucumbers, gherkins, gourds, muskmelons (such as cantaloupes, casabas, Crenshaw, etc.), pumpkin, squash, watermelons.

Fruiting Vegetables, such as: eggplants, groundcherries, pepinos, peppers, pimientos, tomatillos, tomatoes.

Herbs and Spices including, but not limited to: allspice, angelica, anise, annatto, balm, basil, black and white peppers, borage, burnet, chamomile, caper buds, caraway, cardamom, cassia, catnip, celery seeds, chervil, chives, cinnamon, clary, clove, coriander (cilantro), costmary, cumin, curry leaf, dills, fennels, fenugreek, grains of paradise, horehound, hyssop, juniper berry, lavender, lemongrass, lovage, mace, marigolds, marjoram, mustard seeds, nasturium, nutmeg, parsley, pennyroyal, poppy seeds, rosemary, rue, saffron, sage, savory, sweet bay (bay leaf), tansy, tarragon, thyme, vanilla, wintergreen, woodruff, wormwood.

Leafy Vegetables (including brassica leafy vegetables), such as: amaranth, broccoli, Brussels sprouts, cabbage, cauliflower, celery, chervil, Chinese cabbage, collards, cress, endive, fennel, kale, kohlrabi, lettuce, mizuna, mustard greens, parsley, purslane, rape greens, rhubarb, spinach, Swiss chard.

Legume Vegetables, such as: beans (field, kidney, etc.), chickpeas, cowpeas, guar, jackbeans, lablab beans, lentils, peas, pigeon peas, soybeans, sword beans.

Miscellaneous Food and Non-Food crops, such as: artichokes, asparagus, avocados, birdseed, cacao, coffee, cotton, edible flowers, feijoa, figs, ginseng, guayale, hops, kiwis, okras, olives, palms, papayas, pawpaws, persimmons, pineapples, rambutans, sugarcane, tamarillos, tea, tobacco, water chestnuts, watercress.

Nuts, such as: almonds, beechnuts, Brazil nuts, butternuts, cashews, chestnuts, chinquapins, filberts, hickory nuts, lychee nuts, macadamias, pecans, pistachios, walnuts.

Oilseed crops, such as: canola, castor, crambe, guar, jojoba, peanuts, rape, safflower, sesame, soybean, sunflower.

Pome Fruits, such as: apples, crabapples, loquats, mayhaws, oriental pears, pears, quinces.

Root and Tuber Vegetables, such as: beets, carrots, ginger, ginseng, horseradish, potatoes, radishes, rutabagas, sweet potatoes, turmeric, turnips, yams.

Stone Fruits, such as: apricots, cherries, nectarines, peaches, plums, prunes.

Tropical fruits, such as: atemoyas, bananas, breadfruits, cherimoyas, durians, guavas, malangas, mangos, papayas, passionfruits, starfruits.

ORNAMENTAL PLANTS, such as: actinopteris, African violets, ageratum, aglaorema, algerian ivy, allamanda, alocasia, antherium, aphelandra, arbovitae, artemisia, aster, aucuba ilex, baby's breath, begonia, Boston fern, bouganvillea, boxwood, brachycome, cacti, calabrese, caladium, calathea, calendula, calla, camellia, carnation, ceanothus, chrysanthemum, cineraria, coleus, columbine, cotoneaster, cyclamen, daffodil, dahlia, daisy, daylily, delphinium, dianthus, dieffenbachia, dogwood, dusty miller, Easter lily, English ivy, euphorbia, fern, ficus, foliage plants, foxglove, freesia, fuschia, gallardia, gardenia, geranium, gerbera, gladiola, gloxinia, gypsophilla, hederia, hibisous, hyacinth, hydrangea, illex, impatiens, iris, ivy, lily, maidenhair fern, manvilla, marigold, narcissus, nasturtium, orchid, pansy, pelargonium, peony, peperomia, petunia, philodendron, phlox, photinia, pinks, pittosporum, poinsettia, pothos, portulaca, primrose, pyracantha, rhododendron, rosemary, roses, rubber plant, salvia, schefflera, sedum, semperivum, snapdragon, spathiphyllum, stock, syngonium, tulip, verbena, vinca, wandering jew, white cedar, white pine, yew, yucca, zinnia.

ORNAMENTAL TREES AND SHRUBS, such as: andromeda, arborvitae, ash, Austrian pine, azalea, beech, birch, birdsnest spruce, blue spruce, bougainvillea, boxwood, butternut, cedar, chamaecyparis, cherry, crabapple, Cyprus, dogwood, Douglas fir, elm, euonymus, firethorn, forsythia, hackberry, hawthorn, hemlock, hickory, holly, honey locust, horse chestnut, juniper, larch laurel, lilac, linden, London plane, magnolia, manvillia, maple, mimosa, mountain ash, myrtle, oak, pachysandra, peach pine, pines, planetree, poplar, privet, quince, spruce, sycamore.

TURF AND TURFGRASS, such as: bentgrass, Bermuda grass, bluegrass, centipede grass, fescue, rye grass, St. Augustine, wheatgrass, zoysia grass.

CHEMIGATION OF AMVAC AZA 3% EC

GENERAL INFORMATION

This product may be applied through drip (trickle) or sprinkle (center pivot, lateral move, end tow, side roll, traveler, big gun, solid set or hand move), flood (basin) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. 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.

Dilute AMVAC AZA 3% EC with water before introduction into the system. Use the diluted mixture within 8 hours. Do not apply in irrigation water if the pH exceeds 7.0. The optimum pH for application is a range of 5.5 to 6.5. If needed, the pH of the irrigation water can be adjusted by use of a suitable buffering agent. Agitation is necessary. Apply at the rate recommended in the Directions for Use using sufficient water to achieve an even distribution with an 8-hour period. Do not apply AMVAC AZA 3% EC at a rate that exceeds 20 grams active ingredient per acre (22.5 fl oz). If applying AMVAC AZA 3% EC in combination with other products, refer to the compatibility statement in the USE PRECAUTIONS section.

OBSERVE THE FOLLOWING PRECAUTIONS IF YOUR CHEMIGATION SYSTEM IS 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 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of a year.

Chemigation systems connected to a public water system must contain a functional, reduced-pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be 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 of the overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

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 injection pump when the water pump motor stops, or in the 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 speeds favor drift beyond the area intended for treatment.

STATEMENTS CONCERNING THE OPERATION OF SPRINKLER CHEMIGATION OR DRIP (TRICKLE) UTILIZING A PRESSURIZED WATER AND PESTICIDE INJECTION SYSTEM

The system must contain a functional check valve, vacuum relief 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 injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch that 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.

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

STATEMENTS CONCERNING THE OPERATION OF FLOOD (BASIN) IRRIGATION UTILIZING GRAVITY FLOW OR PRESSURIZED WATER AND PESTICIDE INJECTION SYSTEM

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- a. The system must contain a functional interlocking check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of the fluid back toward the injection pump.
- c. 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.
- d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- e. 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.
- f. 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.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not store this product above 100°F or below 20°F for extended periods of time. Keep containers tightly closed and in original containers when not in use.

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

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE FULLEST EXTENT PERMITTED BY LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

AMVAC Chemical Corporation
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Los Angeles, CA 90023 U.S.A.
1-323-264-3910
www.amvac-chemical.com

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ORNAZIN[®] 3% EC BOTANICAL INSECTICIDE

For use in ornamental greenhouses, shadehouses, interiorscapes and nurseries on turfgrass, shrubs, trees, and ornamentals

For controlling and repelling insects such as aphids, armyworms, beetles, budworms, cutworms, fungus gnats, leafhoppers, leafminers, loopers, leafrollers, and other lepidopterous larvae, mealybugs, sawflies, scales, thrips, webworms, whiteflies; and plant parasitic nematodes such as burrowing and root knot nematodes.

ACTIVE INGREDIENT:

Azadirachtin.....3.0%

INERT INGREDIENTS:97.0%

TOTAL100.0%

Contains 0.27 lb. (121 grams) of azadirachtin per gallon.

KEEP OUT OF REACH OF CHILDREN WARNING — AVISO

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

FIRST AID	
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:	
Transportation: CHEMTREC.....1-800-424-9300	
Other: AMVAC.....1-323-264-3910	

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-476
EPA Est. No. 5481-CA-1

Net Contents: 1 QUART
Lot Number _____


4100 E. Washington Blvd.
Los Angeles, CA 90023 U.S.A
1-323-264-3910 • www.amvac-chemical.com

Notification Accepted
date: SEP 20 2011
reviewer: M. Adams

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING: Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear long-sleeved shirt and long pants, socks and shoes, and goggles or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- chemical-resistant (such as barrier laminate, butyl, nitrile, neoprene, polyvinyl chloride, or viton) gloves
- goggles or face shield
- socks and shoes

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

User Safety Recommendations

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not apply this product through any irrigation system unless the chemigation instructions on this label are followed. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Do not enter or allow entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls over long-sleeved shirt and long pants; goggles or face shield; waterproof gloves, and socks and chemical-resistant footwear.

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NON-AGRICULTURAL USE REQUIREMENTS

These requirements apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR, part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. For other uses including golf courses and other non-agricultural uses, do not enter treated areas without protective clothing until sprays have dried.

PRODUCT DESCRIPTION

ORNAZIN 3% EC is an emulsifiable concentrate containing 3.0% by weight azadirachtin. It has been evaluated on a wide variety of ornamental, forestry, and food crops. No phytotoxicity at recommended field rates have been observed. ORNAZIN 3% EC is an insect growth regulator and does not control adult insects. However, ORNAZIN 3% EC is also effective as a repellent towards some adult species as detailed below. ORNAZIN 3% EC is an effective resistance management tool when used in an Integrated Pest Management (IPM) spray program.

Mode of Action

ORNAZIN 3% EC controls insects in the larval, pupal, and nymphal stages by interfering with the metabolism of ecdysone. Insects typically die during larval eclosion and between larval to larval, larval to pupal, nymph to nymph molts, or during adult eclosion.

Compatibility

ORNAZIN 3% EC has been found to be compatible with the most commonly used insecticides, fungicides and fertilizers. Compatibility should be checked by using the correct proportion of the products in a small test container. Growers should then test the tank-mix combinations for possible adverse effects (such as settling out, flocculation, etc.) and for phytotoxic effects on a small sample of plants prior to use. As environmental conditions can alter the interactions between compounds, a compatibility test is recommended for both new and previously used combinations. Avoid mixtures of several materials and very concentrated spray mixtures.

Do not use ORNAZIN 3% EC with Bordeaux mixture, triphenyltin hydroxide, lime sulfur, Rayplex iron or other highly alkaline materials. Use mildly alkaline mixtures immediately after mixing to prevent loss of insecticidal activity.

When using ORNAZIN 3% EC in combination with other products, use ORNAZIN 3% EC at the rate, or half the rate, specified in the Use Rate Recommendation Table. Follow the directions for use, precautions and limitations for use on all of the product labels used in the combination. Some suggested tank mix combinations are as follows:

- ORNAZIN 3% EC plus non-phytotoxic oil*
- ORNAZIN 3% EC plus endosulfan*
- ORNAZIN 3% EC plus chlorpyrifos*
- ORNAZIN 3% EC plus acephate*
- ORNAZIN 3% EC plus bifenthrin*
- ORNAZIN 3% EC plus esfenvalerate*
- ORNAZIN 3% EC plus abamectin*
- ORNAZIN 3% EC plus diflubenzuron*
- ORNAZIN 3% EC plus pyrethrum+piperonyl butoxide (for fogging use)*

* Always follow the manufacturer's Directions for Use and Precautionary Statements.

APPLICATION INSTRUCTIONS

READ ALL DIRECTIONS AND PRECAUTIONS BEFORE USE. ORNAZIN 3% EC is exempt from tolerances and may be applied as directed to any food or non-food crop up to and including the day of harvest at a rate not exceeding 22.5 fl. oz. (20 grams active ingredient) per acre per application.

Mixing

Shake well before mixing. Always use this product promptly after mixing with water. ORNAZIN 3% EC will break down in the spray solution if not used within 8 hours. Never allow tank mix to stand overnight. ORNAZIN 3% EC will break down in spray tank mixtures that have pH values exceeding 7.0. The recommended pH range is between 5.5 and 6.5. For optimum performance, a buffering agent may be used. When mixing with other approved agrichemicals, always ensure proper agitation in the spray tank to ensure uniform application.

From the use rates chart, determine the amount of ORNAZIN 3% EC required for the number of acres to be treated. To a clean spray tank, add at least one-half the water to be sprayed. Begin agitation and add the determined amount of ORNAZIN 3% EC. Add the remaining water and continue agitation.

ORNAZIN 3% EC disperses freely when added to water. Always use clean equipment. For uniform distribution on plant canopy and proper dilution, always ensure proper agitation in mixing tanks or vessels. When mixing with other agrichemicals, add solid constituents (such as wettable powders, water dispersible granules or micronutrients) last in the form of a slurry.

Application Method and Equipment

ORNAZIN 3% EC can be applied as a foliar spray or a drench to soil or non-soil media (e.g., greenhouses) to control insects and nematodes. When needed, soil drenches can also be used to control soil-borne pests including soil-borne larvae of foliar insect pests. When applying as a drench, avoid excessive leaching. ORNAZIN 3% EC can also be applied through sub-surface soil treatment equipment (e.g. turfgrass). ORNAZIN 3% EC can also be injected into mature trees (landscaping, forestry, residential, etc.) using appropriate tree injection equipment. To repel adults, apply through fogging equipment. Always follow equipment manufacturer's Use Directions.

ORNAZIN 3% EC may be applied using any powered or manual pesticide application equipment which includes, but is not restricted to, high-volume, low-volume, ultra-low volume, aerial, electrostatic, fogging, and chemigation. Follow the original manufacturer's recommendations when using these types of equipment.

For optimum results, two applications made at 7 to 10 day intervals are recommended unless otherwise specified. Foliar applications should be made to both sides of leaves. In addition, a surfactant used per the manufacturer's recommendations may improve product performance. The addition of a non-phytotoxic oil at rates not exceeding 1.0% (volume/volume) generally enhances insect control by providing longer residual activity and penetration into plant tissue. However on sensitive plants, addition of oil is not necessary.

USE RATES RECOMMENDATIONS

ORNAZIN 3% EC is intended for use on outdoor plants and plants grown indoors or in greenhouses, shadehouses, interiorscapes and nurseries. It can be used to control any of the following insects and nematodes. ORNAZIN 3% EC can be used on:

GREENHOUSE FOOD CROPS, such as: *brassica* (cole) crops, cucurbits, eggplants, herbs and spices, legumes, peppers, tomatoes, and other miscellaneous crops grown in greenhouses.

ORNAMENTAL PLANTS, such as: actinopterus, African violets, ageratum, aglaonema, Algerian ivy, allamanda, alocasia, anthurium, aphelandra, arborvitae, artemisia, aster, aucuba ilex, baby's breath, begonia, Boston fern, bougainvillea, boxwood, brachycome, cacti, calabrese, caladium, calathea, calendula, calla, camellia, carnation, ceanothus, chrysanthemum, cineraria, coleus, columbine, cotoneaster, cyclamen, daffodil, dahlia, daisy, daylily, delphinium, dianthus, dieffenbachia, dogwood, dusty miller, Easter lily, English ivy, euphorbia, fern, ficus, foliage plants, foxglove, freesia, fuchsia, gaillardia, gardenia, geranium, gerbera, gladiola, gloxinia, gypsophila, hederia, hibiscus, hyacinth, hydrangea, ilex, impatiens, iris, ivy, lily, maidenhair fern, mandevilla, marigold, narcissus, nasturtium, orchid, pansy, pelargonium, peony, peperomia, petunia, philodendron, phlox, photinia, pinks, pittosporum, poinsettia, pothos, portulaca, primrose, pyracantha, rhododendron, rosemary, roses, rubber plant, salvia, schefflera, sedum, sempervivum, snapdragon, spathiphyllum, stock, syngonium, tulip, verbena, vinca, Wandering Jew, white cedar, white pine, yew, yucca, zinnia.

ORNAMENTAL TREES AND SHRUBS, such as: andromeda, arborvitae, ash, Austrian pine, azalea, beech, birch, birdsnest spruce, blue spruce, bougainvillea, boxwood, butternut, cedar, chamaecyparis, cherry, crabapple, cypress, dogwood, Douglas fir, elm, euonymus, firethorn, forsythia, hackberry, hawthorn, hemlock, hickory, holly, honey locust, horse chestnut, juniper, larch, laurel, lilac, linden, London plane, magnolia, mandevilla, maple, mimosa, mountain ash, myrtle, oak, pachysandra, peach pine, pines, planetree, poplar, privet, quince, spruce, sycamore.

TURF AND TURFGRASS, such as: bentgrass, Bermudagrass, bluegrass, centipedegrass, fescue, ryegrass, St. Augustine, wheatgrass, zoysia grass.

USE RATES FOR ANY PLANTS GROWN INDOORS OR IN GREENHOUSES, SHADEHOUSES, INTERIORSCAPES, AND NURSERIES.

Use the table below to determine the appropriate use rate for each pest. Foliar sprays for individual plants should thoroughly wet both sides of the leaves without causing runoff. Mix spray solution according to use rates and recommendations below. For the treatment of small areas, add 1.0 oz ORNAZIN 3% EC to 10 gallons of water. One gallon of finished spray will treat 500 square feet. When used as a drench, apply one pint of finished spray for each gallon of soil in the pot. For large areas, use 100 to 200 gallons of finished spray per acre. Do not exceed 22.5 oz of ORNAZIN 3% EC per acre per application.

PEST	RATE ¹ (oz/100 gallons)	RECOMMENDATIONS
APHIDS , such as: Green Peach aphids, Pea aphids, Cotton aphids, Rose aphids	8	Spray when pests first appear. Addition of 0.5-1.0% non-phytotoxic oil will enhance efficacy.
BETLES , such as: Bark beetles, Flea beetles, Japanese beetles, Leaf beetles	10	Spray when pests first appear. Repeat as needed.
CATERPILLARS , such as: Armyworms, Bagworms, Cutworms, Leafrollers, Loopers, Spruce Budworms, Webworms	8	Spray when pests first appear.
FLIES , such as: Crane flies, Fungus gnats, Shore flies	8	Add at least 1 pint of mixture per gallon pot as soil drench. Repeat application every 7 days for 3 weeks. For poinsettias, lilies and bedding plants also make one application 10 to 15 days prior to shipping plants to prevent adult emergence.
LACEWINGS , such as: Azalea lacewings	8	Spray when pests first appear. Addition of 0.5-1.0% non-phytotoxic oil will enhance efficacy.

PEST	RATE ¹ (oz/100 gallons)	RECOMMENDATIONS
LEAFHOPPERS , such as: Grape leafhoppers, Potato leafhoppers	10	Spray when pests first appear. Repeat application every 5 to 7 days.
LEAFMINERS , such as: Serpentine leafminers	10	Spray early. Make 2 applications in rotation with adulticides such as pyrethroids.
MEALYBUGS	8	Use in combination with 0.5-1.0% non-phytotoxic oil.
NEMATODES , such as: Burrowing nematodes, Root Knot nematodes	8	Drench at least 1 pint of mixture per gallon pot once a week for 4 weeks. Avoid leaching-drench until moist to the touch. For heavy infestations, use the higher rate and drench more frequently.
SOFT SCALES	10	Use in combination with 0.5-1.0% non-phytotoxic oil in sufficient water to cover twigs and leaves.
THRIPS , such as: Western Flower thrips	8	Spray when pests first appear. Repeat every 5 to 7 days.
WEEVILS , such as: Black Vine weevils, Strawberry Vine weevils	8	Make foliar applications to deter adult feeding. Make soil drench applications during spring and fall periods to control larvae. Make at least 3 to 4 applications 10 days apart.
WHITEFLIES , such as: Greenhouse whiteflies, Silverleaf whiteflies	10	Ensure good coverage to top and bottom of leaves against larvae and pupae. Can be applied after bract formation on poinsettias. (Test for phytotoxicity prior to large-scale use.)

¹ When infestation is heavy, or when plant canopy is dense, ORNAZIN 3% EC may be used at a rate up to twice (2x) that shown in the above table, not to exceed 22.5 oz/acre. When combining with other insecticides, half the rate of ORNAZIN 3% EC is recommended.

USE RATES FOR OUTDOOR PLANTS INCLUDING FOOD CROPS, TREES, TURFGRASS, NURSERY AND ALL OUTDOOR ORNAMENTAL PLANTS.

Use the table below to determine the appropriate use rate for your site/pest combination. Rates are provided in ounces of ORNAZIN 3% EC per acre or row length. When infestation is heavy or when plant canopy is dense, ORNAZIN 3% EC may be used at a rate up to twice (2x) that shown in the table below, not to exceed 22.5 oz/acre. When combining with other insecticides, use half the recommended rate of ORNAZIN 3% EC.

ORNAZIN 3% EC can be injected into mature trees (landscaping, forestry, residential, etc.) using appropriate tree injection equipment. Inject at the rate of 0.15 to 0.20 fl. oz. per inch tree trunk diameter, and repeat application if needed. DO NOT exceed 22.5 fl. oz. per acre per application.

PEST	RATE ¹ (oz/acre)	RECOMMENDATIONS
APHIDS , such as: Cotton aphids, Green Peach aphids, Pea aphids, Potato aphids, Rose aphids	10	Spray when pests first appear. Repeat application every 5 to 7 days.

PEST	RATE ¹ (oz/acre)	RECOMMENDATIONS
BEETLES , such as: Bark beetles, Colorado Potato beetles, Flea beetles, Japanese beetles, Leaf beetles, Mexican Bean beetles, Rose chafers, Twig girdlers	8	Spray when pests first appear. Repeat application after 7-10 days. Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves. Oil not required for adult Japanese beetle repellency.
BORERS , such as: Dogwood borers, Cranberry borers, girdlers, Peachtree borers, Peach Twig borers	10	Spray soon after egg hatch.
BUGS , such as: Boxelder bugs, Chinch bugs, Lygus bugs, Spittle bugs, Stink bugs	10	Spray nymphs early.
CATERPILLARS , such as: Armyworms, Bagworms, Budworms, Cankerworms, Casebearers, Caseworms, Corn earworms, Cutworms, Fruitworms, Gypsy moths, Hornworms, Leaf perforators, Leafrollers, Navel Orange worms, Pine Tip moths, Sod webworms, Tent caterpillars, Tobacco budworms, Tussock moths	8	Spray when pests first appear. Repeat application after 5-7 days.
FLIES , such as: Cherry maggots, Crane flies, Midges	10	Drench soil to kill larvae.
LEAFHOPPERS , such as: Variegated leafhoppers	10	Spray when pests first appear. Repeat application every 5 to 7 days.
LEAFMINERS , such as: Azalea leafminers, Birch leafminers, Serpentine leafminers, Vegetable leafminers	10	Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves.
MEALYBUGS , such as: Apple mealybugs, Citrus mealybugs, Grape mealybugs	10	Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover twigs and leaves.
NEMATODES , such as: Burrowing nematodes, Dagger nematodes, Golden nematodes, Root Knot nematodes	15	Apply in sufficient amount of water to penetrate in the soil to a depth of 12 inches. Repeat applications every 3 or 4 weeks or as needed.
PSYLLIDS , such as: Pear psylla	8	Spray when pests first appear. Repeat application after 7-10 days. Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves.
SAWFLIES , such as: European Pine sawflies, Pear sawflies, Red-Headed Pine sawflies, Yellow-Headed Pine sawflies	10	Treat larvae early.
SCALES , such as: Black scales, Brown Soft scales, California Red scales, Coffee scales, Olive scales, San Jose scales	10	Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover twigs and leaves.
THRIPS , such as: Citrus thrips, Onion thrips, <i>Thrips palmi</i> , Western Flower thrips	10	Spray when pests first appear. Repeat every 5 to 7 days.
WEEVILS , such as: Black Vine weevils, Strawberry Vine weevils	10	Make foliar applications to deter adult feeding. Make soil drench applications during spring and fall periods to

PEST	RATE ¹ (oz/acre)	RECOMMENDATIONS
		control larvae. Make at least 3 applications 10 days apart.
WHITEFLIES , such as: Greenhouse whiteflies, Silverleaf whiteflies, Woolly whiteflies	8	Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover undersides of leaves.

¹ When infestation is heavy, or when plant canopy is dense, ORNAZIN 3% EC may be used at a rate up to twice (2x) that shown in the above table, not to exceed 22.5 oz/acre. When combining with other insecticides, half the rate of ORNAZIN 3% EC is recommended.

CHEMIGATION OF ORNAZIN 3% EC

GENERAL INFORMATION

This product may be applied through drip (trickle) or sprinkle (center pivot, lateral move, end tow, side roll, traveler, big gun, solid set or hand move), flood (basin) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. 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.

Dilute ORNAZIN 3% EC with water before introduction into the system. Use the diluted mixture within 8 hours. Do not apply in irrigation water if the pH exceeds 7.0. The optimum pH for application is a range of 5.5 to 6.5. If needed, the pH of the irrigation water can be adjusted by use of a suitable buffering agent. Agitation is necessary. Apply at the rate recommended in the Directions for Use using sufficient water to achieve an even distribution within an 8-hour period. Do not apply ORNAZIN 3% EC at a rate that exceeds 20 grams active ingredient per acre (22.5 fl oz). If applying ORNAZIN 3% EC in combination with other products, refer to the compatibility statement in the USE PRECAUTIONS section.

OBSERVE THE FOLLOWING PRECAUTIONS IF YOUR CHEMIGATION SYSTEM IS 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 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of a year.

Chemigation systems connected to a public water system must contain a functional, reduced-pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be 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 of the overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

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 injection pump when the water pump motor stops, or in the 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 speeds favor drift beyond the area intended for treatment.

STATEMENTS CONCERNING THE OPERATION OF SPRINKLER CHEMIGATION OR DRIP (TRICKLE) UTILIZING A PRESSURIZED WATER AND PESTICIDE INJECTION SYSTEM

The system must contain a functional check valve, vacuum relief 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 injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch that 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.

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

STATEMENTS CONCERNING THE OPERATION OF FLOOD (BASIN) IRRIGATION UTILIZING GRAVITY FLOW OR PRESSURIZED WATER AND PESTICIDE INJECTION SYSTEM

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- a. The system must contain a functional interlocking check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of the fluid back toward the injection pump.
- c. 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.
- d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- e. 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.
- f. 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.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not store this product above 100°F or below 20°F for extended periods of time. Keep containers tightly closed and in original containers when not in use.

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

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions.

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