ECOZIN® PLUS

1.2% ME

BOTANICAL INSECTICIDE, REPELLANT, INSECT GROWTH REGULATOR AND NEMATICIDE

Department of Agriculture
STATE OF HAWAII

9521.79

LICENSED

PERIOD 2014-2016 LIC. NO.

For mushroom house and manure pile and compost uses

For use on outdoor food crops

For commercial and industrial areas

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

For Use in Organic Production

ACTIVE INGREDIENT:	By Weight
Azadirachtin	1.2%
Inert Ingredients:	98.8%
TOTAL	100.0%

Contains 0.10 lb. (45.4 grams) of azadirachtin per gallon.

EPA Reg. No. 5481-559 EPA Est. No. 5481-CA-1

KEEP OUT OF REACH OF CHILDREN

CAUTION - CUIDADO

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

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

AMVAC®
4100 E. Washington Blvd. • Los Angeles, CA 90023 U.S.A.
1-888-462-6822

OMRI LISTED
For Organic Use

Net Contents: 1 Gallon

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FIRST AID	
If in eyes	• 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	• 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: For Medical Emergencies Phone:..... 1-888-681-4261 For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC® ..... 1-800-424-9300 For Product Use Information phone: AMVAC®..... 1-888-462-6822

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Causes moderate eye irritation. Harmful if absorbed through skin or inhaled. Prolonged or frequently repeated skin contact may cause allergic reactions on some individuals. Do not get in eyes or on clothing. Avoid contact with eyes, or clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- 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.

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 wash waters or rinsate.

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 **4 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 short sleeved shirt and short pants
- Waterproof gloves
- Shoes plus socks

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.

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 - GENERAL

ECOZIN PLUS 1.2% ME is a microemulsion concentrate containing 1.2% by weight azadirachtin. It has been evaluated on a wide variety of ornamental, forestry and food crops. No phytotoxicity has been observed when used as directed. ECOZIN PLUS 1.2% ME is an insect growth regulator and does not control adult insects. Results are typically observed 3 – 7 days after first treatment. However, ECOZIN PLUS 1.2% ME is also effective as a repellent towards some adult species as detailed below. When ECOZIN PLUS 1.2% ME applications are rotated with other insecticides as part of a comprehensive Integrated Pest Management (IPM) program, insecticide resistance can be significantly delayed or prevented in target insect populations.

Bee Toxicity: ECOZIN PLUS 1.2% ME is not toxic to bees but applications should be made only when bees are not actively foraging.

Mode of Action

ECOZIN PLUS 1.2% ME is an insect growth regulator (IGR) and controls insects in the larval/nymphal and pupal, stages by interfering with the metabolism of ecdysone which is the key molting hormone in insects. Insects typically die during egg hatch and between larval to larval (nymph to nymph), larval to pupal molts, or during adult eclosion from pupae. Azadirachtin also effectively kills insects in the pupal stages by shutting down ecdysone hormone activity and thereby widens the window of control. Uptake by insects is either by contact, by ingestion or both. Predatory insects or predatory mites which do not feed on plants are therefore generally not affected by ECOZIN PLUS 1.2% ME-- making it compatible with many biological insect control programs as well.

Repellency: ECOZIN PLUS 1.2% ME has been shown to be an effective repellent to a wide range of insect species and treated plants exhibit reduced feeding damage or egg laying by insect pests because of the repellent action of the product.

Compatibility

ECOZIN PLUS 1.2% ME is a true microemulsion (water dilutions appear translucent) and has been determined to be compatible with the most commonly used insecticides, fungicides and fertilizers. However, growers should always check compatibility by using the correct proportion of the intended 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 multiple products and very concentrated spray mixtures.

Do not use ECOZIN PLUS 1.2% ME with Bordeaux mixture, triphenyltin hydroxide, lime sulfur, Rayplex iron or other highly alkaline materials. Use mildly alkaline mixtures immediately after mixing. Alternatively, the pH of the spray mixture can be lowered with acid buffers to prevent loss of insecticidal activity. Azadirachtin breaks down rapidly at high pH.

When using ECOZIN PLUS 1.2% ME in combination with other products, use ECOZIN PLUS 1.2% ME at the rate specified in this label. Follow the directions for use, precautions and limitations for use on all product labels used in the combination. Since azadirachtin is an insect growth regulator, tank mixing an insecticide that kills adults provides additional benefit. Some suggested tank mix combinations are as follows:

ECOZIN PLUS 1.2% ME plus a standard non-phytotoxic oil or organosilicone oil combinations
ECOZIN PLUS 1.2% ME plus endosulfan*
ECOZIN PLUS 1.2% ME plus chlorpyrifos or other organophosphates*
ECOZIN PLUS 1.2% ME plus *Bacillus thuringiensis** (BT)
ECOZIN PLUS 1.2% ME plus bifenthrin or other pyrethroids*
ECOZIN PLUS 1.2% ME plus abamectin*
ECOZIN PLUS 1.2% ME plus imidacloprid or other neo-nicotinoids*
ECOZIN PLUS 1.2% ME plus pyrethrum+piperonyl butoxide (for fogging use)*

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

Phytotoxicity

In general, no phytotoxicity has been observed when plants or trees are sprayed with ECOZIN PLUS 1.2% ME at higher rates than those provided in the directions for use. Avoid using on certain pear varieties (such as *Comice*) as leaf drop may occur. On certain plants, such as blueberries, grapes, or vegetables such as cabbage, frequent sprays may slightly reduce the waxy coating on leaves and fruit (without other adverse symptoms). Always exercise care when mixing adjuvants by performing a pre-test on sample plants prior to large-scale use.

APPLICATION INSTRUCTIONS

READ ALL DIRECTIONS AND PRECAUTIONS BEFORE USE. ECOZIN PLUS 1.2% ME is exempt from food crop tolerances (40 CFR Sec 180.1119) and may be applied as directed to any food or non-food crop up to and including the day of harvest (0 day PHI) at a rate not exceeding 56.4 oz. (20 grams active ingredient) per acre per application. Crops can be harvested as soon as spray has dried.

Mixing

Shake well before use. Always use this product promptly after mixing with water. ECOZIN PLUS 1.2% ME will break down in the spray solution if not used within 8 hours. Never allow tank mix to stand overnight. The recommended pH range is between 5.5 and 6.5. ECOZIN PLUS 1.2% ME will break down under high pH conditions (> pH 7.5). 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 ECOZIN PLUS 1.2% ME 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 ECOZIN PLUS 1.2% ME. Add the remaining water and continue agitation.

ECOZIN PLUS 1.2% ME 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

ECOZIN PLUS 1.2% ME can be applied as a foliar spray or a drench to soil, compost, manure or non-soil media (e.g., greenhouses, compost and manure piles and mushroom houses) to control insects and nematodes. When needed, soil drenches can also be used to control soil-borne pests including soil-dwelling larvae of foliar insect pests. When applying as a drench, ensure good wetting of the soil or media but avoid excessive leaching. ECOZIN PLUS 1.2% ME can also be applied through sub-surface soil treatment equipment (e.g. turfgrass). ECOZIN PLUS 1.2% ME can also be injected into mature trees (landscaping, forestry, residential, etc.) using appropriate tree injection equipment. To repel adults in mushroom houses, apply through fogging equipment. Always follow equipment manufacturer's Use Directions.

ECOZIN PLUS 1.2% ME may be diluted in water volumes ranging from 5 gallons/acre (low-volume or aerial) to around 300 gallons/acre (high-volume) depending on canopy size and spray equipment. Avoid spray run-off. ECOZIN PLUS 1.2% ME may be applied using any powered or manual pesticide application equipment which includes, but 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.

Application Timing, Frequency and Use of Adjuvants

For optimum results, make applications when pests first appear or at egg hatch. **Two applications made at 7 to 10 day intervals are recommended unless otherwise specified.** Make foliar applications to both sides of leaves. ECOZIN PLUS 1.2 ME can be mixed with suitable sticking agents (adjuvants) as per manufacturer's use recommendations to improve product performance, especially when rain is anticipated. The addition of any non-phytotoxic vegetable or synthetic oil can also improve product performance especially against certain insects such as leafminers, mealybugs or scales. Do not exceed 1.0% (v/v) and follow oil manufacturer's use recommendations. The addition of oil improves penetration of azadirachtin into leaves and prolongs residual activity. However on sensitive plants, addition of oils should be avoided (see phytotoxicity section above).

USE RATE

ECOZIN PLUS 1.2% ME is intended for use on all outdoor plants and all food crops, in mushroom houses, manure piles, and non-crop lands.

General Use Directions: ECOZIN PLUS 1.2% ME has excellent dispersion qualities and must be used at rates ranging from 15-30 oz/acre for a wide range of crop and pest conditions. Due to the unique nature of the formulation, for foliar applications, more than 30 oz/acre are generally not required. Growers can make more frequent applications at a lower rate rather than fewer applications at high rates. However, when pest infestation levels are low or when tank-mixed with other compatible insecticides, ECOZIN PLUS 1.2% ME can be used at 8-15 oz but do not use less than 4 oz/acre per application. When pest levels increase or show an increasing trend or when crop canopy size increases, adjust rates higher. Spraying twice at 7-10 day intervals. However, spraying every 3-5 days may be needed to keep a rapidly-increasing population in check. If rain occurs soon after treatment, re-spraying the field may be required. Addition of compatible sticking agents may aid rain-fastness.

Time of Application: For optimum results, spray during early morning hours or later during the day when pests are least active.

Use the table below to determine the appropriate use directions for your site/pest combination. When infestation is heavy or when plant canopy is dense, ECOZIN PLUS 1.2% ME may not exceed 56.4 oz/acre. When combining with other insecticides, use half the recommended rate of ECOZIN PLUS 1.2% ME.

FOR USE ON ALL OUTDOOR PLANTS INCLUDING FOOD AND FIBER CROPS, AND TREES. Depending on pest pressure and stage of crop, use at the rate of 15 – 30 oz/acre. When pest infestations are low and/or crop height is small, or when tank-mixed with other insecticides, ECOZIN PLUS 1.2% ME can be used at half rate, but not less than 4 oz per acre per application. Adjust rate upwards as crop matures or when pest populations increase. Do not exceed 56.4 oz/acre per application. Make at least 2 applications in sequence 7-10 days apart for maximum efficacy. Buffer spray solution to pH 5.5 to 6.5 for maximum efficacy. Active ingredient will break down rapidly at high pH.	
PEST	**COMMENTS**
APHIDS, such as: Apple Aphids, Cabbage Aphids, Cotton Aphids, Green Peach Aphids, Pea Aphids, Grape phylloxera, Potato Aphids, Rose Aphids	Spray when pests first appear. Spray immediately after the first winged alates or clones are observed on plants. Repeat application after 7-10 days.
BEETLES, 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	Spray when pests first appear. Repeat application after 7-10 days.
BORERS, such as: Dogwood Borers, Cranberry Borers, Girdlers, Peachtree Borers, Peach Twig Borers	Spray soon after egg hatch. 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, Lace Bugs, Lygus Bugs, Spittle Bugs, Stink Bugs	Spray nymphs early and repeat application after 7 days.
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 (*Lacanobia*), 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	Spray when pests first appear or when leaf damage is first observed. Repeat application after 7-10 days.
FLIES, such as: Blueberry Maggots, Cherry Maggots, Crane Flies, Fruit Flies, Fungus gnats, Midges, Onion Maggots, Tipworms, Walnut Husk Flies	Time sprays to anticipate egg hatch or when pests first appear. Drench soil to kill larvae.

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PEST	COMMENTS
LEAFHOPPERS, such as: Apple Leafhoppers, Beet Leafhoppers, Grape Leafhoppers, Potato Leafhoppers, Variegated Leafhoppers	Spray when pests first appear. Repeat application after 7-10 days.
LEAFMINERS (both Dipteran and Lepidopteran), such as: Azalea Leafminers, Birch Leafminers, Citrus Leafminers, Serpentine Leafminers, Vegetable Leafminers, Western Tentiform Leafminers	Spray early before mining activity increases. Mixing an adulticide to kill adults generally enhances control. Make at least 2-3 applications to target pupal stage as well.
MEALYBUGS, such as: Apple Mealybugs, Citrus Mealybugs, Grape Mealybugs	Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover twigs and leaves. Thoroughly wet plant surfaces.
NEMATODES, such as: Banana Nematodes, Burrowing Nematodes, Dagger Nematodes, Golden Nematodes, Ring Nematodes, Root Knot Nematodes, Sting Nematodes	Make applications to orchard crops such as grapes through appropriate chemigation systems. Treat in early spring and/or late fall with at least 3-4 applications made 10-14 days apart. Add acid buffer if necessary.
PSYLLIDS, such as: Pear Psylla	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. On pears, avoid using on varieties of Comice parentage.
SAWFLIES, such as: European Pine Sawflies, Pear Sawflies, Red-Headed Pine Sawflies, Yellow-Headed Pine Sawflies	Treat larvae early before significant feeding activity.
SCALES, such as: Black Scales, Brown Soft Scales, California Red Scales, Coffee Scales, Olive Scales, San Jose Scales	Use in combination with 0.25-1.0% non-phytotoxic oil in sufficient water to cover twigs and leaves. Thoroughly wet plant surfaces.
THRIPS, such as: Citrus Thrips, Onion Thrips, *Thrips palmi*, Western Flower Thrips	Spray when pests first appear. Repeat every 5 to 7 days. Mixing an adulticide generally enhances control. Spray every 3-4 days to maintain insect repellency.
WEEVILS, such as: Black Vine Weevils, Pepper Weevils, Rice Weevils, Strawberry Vine Weevils	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 foliar applications 10 days apart to maintain adult repellency.
WHITEFLIES, such as: Greenhouse Whiteflies, Sweet Potato Whiteflies, Silverleaf Whiteflies, Woolly Whiteflies	Spray at 5-7 day intervals. Combination with an adulticide enhances efficacy by eliminating egg laying.

USE RATES FOR MUSHROOMS IN MUSHROOM HOUSES or MANURE PILES		
PEST	**RATE[1] (oz/1,000 sq. ft.)**	**COMMENTS**
Mushroom Flies or Sciarid Flies, Houseflies, Phorid Flies, Nematodes	1.25	Apply as drench to the casing layer, media or compost. Make at least 4 to 5 applications 7 days apart. To repel adults, apply with fogging equipment at first sign of activity. **For Mushroom House Use:** Mix into or spray on to the casing layer, or incorporate 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 20 oz/50 gallons and sprayed or drenched on logs or media. **For Manure Piles and Compost:** Surface treat and incorporate using appropriate equipment when the manure piles are moist. Avoid treating when manure is too wet. Directly spray on to areas where flies are actively breeding. Mix with adulticides such as pyrethroids or organophosphates to kill adult flies.

[1] Do not exceed 1.25 oz. ECOZIN PLUS 1.2% ME per 1,000 square feet, or 56.4 oz. per acre per application.

USE DIRECTIONS FOR CONTROLLING VARIOUS SPECIES OF NEMATODES IN THE FIELD		
PEST	**RATE (oz)/ACRE**	**COMMENTS**
NEMATODES, such as: Banana Nematodes, Burrowing Nematodes, Dagger Nematodes, Golden Nematodes, all species of Root Knot Nematodes, Sting Nematodes, Ring Nematodes, and other soil dwelling plant pathogenic Nematodes	25.0 – 56.0	**On Grapes (all types)**: Make at least 3 applications 10-20 days apart during the spring and summer months. Make 2 early fall applications (10-20 days apart). Apply through proper drip irrigation systems. **For Trees (Nut and Fruit)**: Drench or inject the area around the drip line and thoroughly soak the soil in Spring and Fall. **For Melons, Strawberries, Tomatoes and Other Fruit and Vegetable Crops grown in beds**: Drench soil at least 3 times 10-14 days apart. Apply through drip system. **Important**: Add buffering and wetting agents to aid penetration into the soil profile and to increase efficacy. Treat early in the morning to maximize plant uptake and ensure good dispersion around the root zone. For heavy infestations, use the higher rate and drench more frequently. Read the chemigation section of this label for more details.

USE SITES

ECOZIN PLUS 1.2% ME can be used on:

GREENHOUSE FOOD CROPS, such as: *Brassica* (cole) crops, Cucurbits, Eggplants, Herbs and Spices, Leafy Vegetables, Legumes, Peppers, Tomatoes, and other miscellaneous crops grown in greenhouses (including hydroponic systems).

MUSHROOMS, such as: *Agaricus*, Enoki, Maitake, Oyster, Shiitake and other specialty mushrooms.

NON-CROP AREAS: ECOZIN PLUS 1.2% ME can be applied to non-crop areas, such as athletic fields, barrier strips, campsites, cemeteries, farm yards, fence rows, fuel storage areas, grasslands, pastures, rights-of-way, sheds, soil banks, uncultivated or fallow farmland, vegetative barriers and fences, and areas surrounding agricultural farms or other buildings.

COMPOST AND MANURE TREATMENT: Manure or refuse piles, mulches, cull piles, pre-treatment for potting soils or compost for mushroom houses or greenhouses, soil application with no mention of crops to be grown (potting soil, top soil).

COMMERCIAL AND INDUSTRIAL AREAS, such as: Food and feed processing plants (fresh fruit and vegetable packing and processing), food marketing, food storage, food distribution, feedlot operations, dairy operations and poultry farms to treat manure on and off-site.

ALL FOOD AND FIBER CROPS including:

BERRIES, such as: Blackberries and Caneberries, Blueberries, Cranberries, Currants, Elderberries, Gooseberries, Grapes, Huckleberries, Loganberries, Raspberries (black and red), Strawberries, Youngberries.

BULB VEGETABLES, such as: Garlic, Leek, Onion (dry bulb, green and Welch), Shallot.

CEREAL GRAINS AND GRAINS, such as: Barley, Buckwheat, Corn, Millet (pearl and Proso), Oats, Popcorn, Rice, Rye, Sorghum (milo), Teosinte, Triticale, Wheat, Wild Rice.

CITRUS FRUITS, such as: Calamondins, Citrus Citrons, Citrus hybrids, Grapefruits, Kumquats, Lemons, Limes (including Spanish Lime), Mandarins (Tangerines), Oranges (sour and sweet), Pummelos, Satsuma Mandarins, White Sapotes, Uniq (Ugli) Fruits.

COTTON AND TOBACCO

CUCURBIT VEGETABLES, such as: Bitter Melons, Chayotes, Chinese Waxgourds, Citron Melons and other melons, Cucumbers, Gherkins, Gourds (edible), Muskmelons (such as Cantaloupes, Casabas, Crenshaw, etc.), Pumpkins, Squash (summer and winter), Watermelons.

FRUITING VEGETABLES, such as: Eggplants, Groundcherries, Pepinos, Peppers (including Bell Peppers, Chili Peppers, Cooking Peppers, Pimentos, Sweet Peppers), Tomatillos, Tomatoes.

HERBS AND SPICES, including, but not limited to: Allspice, Angelica, Anise (anise seed and star), Annatto (seed), Balm (lemon balm), Basil, Black and White Peppers, Borage, Burnet, Chamomile, Caper Buds, Caraway (black), Cardamom, Cassia Bark, Cassia Buds, Catnip, Celery Seeds, Chervil (dried), Chives, Chinese Chives, Cinnamon, Clary, Clove, Coriander (Cilantro), Costmary, Cumin, Curry Leaf, Dill (dillweed and seed), Endive, Fennel (common, Florence), Fenugreek, Grains of Paradise, Horehound, Hyssop, Juniper Berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigolds, Marjoram, Mustard (seed), Nasturtium, Nutmeg, Parsley (fresh), Pennyroyal, Pepper (black and white), Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Skirret, Sweet Bay (Bay Leaf), Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

LEAFY AND BRASSICA (COLE) VEGETABLES, such as: Amaranth, Arugula, Broccoli, Broccoli raab (rapini), Brussels Sprouts, Cabbage, Cauliflower, Cardoon, Cavolo broccoli, Celery, Chervil, Chinese Broccoli (gai lon) Chinese Cabbage (bok choy, Napa), Chinese Mustard Cabbage (gai choy), Chinese Celery, Celtuce, Chrysanthemum (edible-leaved, Garland), Collards, Corn Salad, Cress (garden, upland), Dandelion, Dock (sorrel), Endive (escarole), Fennel (florence), Kale, Kohlrabi, Lettuce (head and leaf), Mizuna, Mustard Greens, Mustard Spinach, Orach, Parsley, Purslane (garden, winter), Radicchio (red chicory), Rape Greens, Rhubarb, Spinach, Spinach (New Zealand, vine), Swiss Chard.

LEGUME VEGETABLES (Succulent or Dried), such as: Beans (Field, Kidney, etc.), Broad Beans, Chickpeas, Cowpeas, Guar, Jackbeans, Lablab Beans, Lentils, Peas, Pigeon Peas, Soybeans, Sword Beans.

MISCELLANEOUS FOOD AND NON-FOOD CROPS, such as: Arracacha, Artichokes, Asparagus, Avocados, Bananas, Birdseed, Cacao, Cocoa, Coffee, Cotton, Cranberry, Cress, Edible Flowers, Feijoa, Figs, Ginseng, Globe Artichoke, Grape, Guayale, Hops, Jicama, Kiwifruit, Kiwis, Mangos, Mushrooms, Okras, Olives, Palms, Papayas, Pawpaws, Peanuts, Persimmons, Pineapples, Pomegranates, Rambutans, Strawberries, Tea, Sugarcane, Tamarillos, Tea, Tobacco, Water Chestnuts, Watercress, and all other food crops.

OILSEED CROPS, such as: Canola, Castor, Crambe, Guar, Jojoba, Peanuts, Rapeseed, Safflower, Sesame, Soybean, Sunflower.

POME FRUITS, such as: Apples, Crabapples, Loquats, Mayhaws, Oriental Pears, Pears (do not use on Comice parentage varieties of Pear), Quinces.

ROOT AND TUBER VEGETABLES, such as: Arracacha, Arrowroot, Artichoke (Jerusalem, Chinese), Beets (garden, sugar), Burdock (edible), Canna (edible), Carrots, Cassava (bitter and sweet), Celeriac (celery root), Chayote (root), Chervil (turnip-rooted), Chicory, Chufa, Dasheen (taro), Ginger, Ginseng, Horseradish, Leren, Oriental Radish (daikon), Parsley (turnip-rooted), Parsnip, Potatoes, Radishes, Rutabagas, Salsify (oyster plant, black, Spanish), Skirrets, Sweet Potatoes, Taniers, Turmeric, Turnips, Yam Beans (Jicama, Manoic pea), true Yams.

STONE FRUITS, such as: Apricots, Cherries (sweet and tart), Nectarines, Peaches, Plums (Chickasaw, Damson, Japanese), Plumcots, Prunes.

TREES AND NUTS, such as: Almonds, Beechnuts, Brazil Nuts, Butternuts, Cashews, Chestnuts, Chinquapins, Filberts (hazelnuts), Hickory Nuts, Lychee Nuts, Macadamia Nuts (bush nuts), Pecans, Pistachios, Walnuts (black and English), Pistachios.

TROPICAL FRUITS, such as: Acerolas, Atemoyas, Bananas, Black Sapotes, Brazil Nuts, Breadfruits, Canistel, Cherimoyas, Durians, Feijoas, Guavas, Ilamas, Jaboticabas, Longans, Lychees, Malangas, Mamey Sapotes, Mangos, Marmel, Papayas, Passion Fruits, Pulasans, Sapote, Sapodillas, Star Apples, Sugar Apples, Custard Apples, Rambutans, Soursop, Spanish Limes, Biriba, Starfruits, Wax Jambu.

CHEMIGATION OF ECOZIN PLUS 1.2% ME

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) or ebb and flow and hydroponic irrigation systems.

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 ECOZIN PLUS 1.2% ME with water before introduction into the system. Use the diluted mixture within 8 hours. Reduce pH of irrigation water if the pH exceeds 7.0 by using appropriate acidifying/buffering agent. The optimum pH for application is a range of 5.5 to 6.5. 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 ECOZIN PLUS 1.2% ME at a rate that exceeds 20 grams active ingredient per acre (56.4 oz). If applying ECOZIN PLUS 1.2% ME in combination with other products, refer to the compatibility section elsewhere in the label.

OBSERVE THE FOLLOWING PRECAUTIONS IF 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

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Do not re-use container.

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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NOTES

ECOZIN® PLUS

1.2% ME

BOTANICAL INSECTICIDE, REPELLANT, INSECT GROWTH REGULATOR AND NEMATICIDE

For Use in Organic Production

ACTIVE INGREDIENT:	**By Weight**
Azadirachtin	1.2%
Inert Ingredients:	98.8%
TOTAL	100.0%

Contains 0.10 lb. (45.4 grams) of azadirachtin per gallon.

EPA Reg. No. 5481-559 EPA Est. No. 5481-CA-1

KEEP OUT OF REACH OF CHILDREN

CAUTION - CUIDADO

FIRST AID

If in eyes: 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:** 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:

For Medical Emergencies Phone: 1-888-681-4261

For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC® 1-800-424-9300

For Product Use Information phone: AMVAC®..... 1-888-462-6822

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Causes moderate eye irritation. Harmful if absorbed through skin or inhaled. Prolonged or frequently repeated skin contact may cause allergic reactions on some individuals. Do not get in eyes or on clothing. Avoid contact with eyes, or clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing before reuse.

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 wash waters or rinsate.

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS, STORAGE AND DISPOSAL, AND DIRECTIONS FOR USE.

Net Contents: 1 Gallon

AMVAC®

4100 E. Washington Blvd. • Los Angeles, CA 90023 U.S.A.
1-888-462-6822

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For Organic Use

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