

**For use as Poultry Spray**

Pest	Application Rates	Remarks
To kill poultry lice	Using a dilution of 2.5 to 4 fluid ounces of concentrate per gallon of water (20 to 32 mL of water) spray roosts, walls and nests or cages thoroughly.	It is not necessary to remove poultry from the housing unit during treatment. This should be followed by spraying over the birds with a fine mist. Do not apply more than 1 time per day.
To kill mites on poultry and in poultry houses	Dilute at the rate of 2.5 to 4 fluid ounces per gallon (20 to 32 mL of water) of water and spray crevices of roost poles, cracks in walls and cracks in nests where the bed bugs and mites hide.	This should be followed by spraying over the birds with a fine mist. Do not apply more than 1 time per day.
To kill adult darkling beetle (lesser meal worm)	Dilute 2 to 5 teaspoons (10 – 25 ml) of PyGanic® Crop Protection EC 5.0II per gallon of water. Using a power or proportioner-type sprayer, apply a uniform spray until wet at pressures of 80 to 100 pounds per square inch to surfaces such as interior walls, roosting posts, structural support pillars, and other surfaces where adult beetles are observed. One gallon of spray mixture covers 250 – 500 sq ft (23 m <sup>2</sup> – 46 m <sup>2</sup> ).	For maximum effectiveness, treatments should coincide with poultry house clean out and litter replacement as this activity will tend to flush beetles to vertical surfaces where they will be exposed to the spray. Indoor control can be enhanced by making perimeter treatments around the outside of buildings. To prevent immigrating adult beetles, apply a uniform band of spray 2 feet (0.6 m) up and 1-4 feet (0.3 – 1.2 m) out from the foundation. Do not contaminate food/feed or water. Do not apply more than 1 time per day.

**FOR USE ON PRODUCTION ANIMALS IN BARNS, DAIRIES, MILKING PARLORS, MILKING ROOMS AND POULTRY HOUSES:** Product must be formulated to deliver no more than this maximum rate when used according to directions:

Surface application 0.0056 lbs ai/1,000 sq. ft. or 18 fl oz. of PyGanic® Crop Protection EC 5.0II /1,000 sq. ft.  
 Crack/crevice or spot surface –0.056 lbs ai./ 1,000 sq. ft. or 18 fl oz. of PyGanic® Crop Protection EC 5.0II /100 sq. ft.

Space sprays when non-domestic animals are absent-0.0033lbs ai. /1,000 cubic feet of space or 1 fl. oz. or 1 fl. oz. of PyGanic® Crop Protection EC 5.0II/ 1,000 cubic feet of space.

Space sprays when non-domestic animals are present 0.0008 lb ai/ 1000 cubic feet of space or 0.26 fl. oz of PyGanic® Crop Protection EC 5.0II / 1,000 cubic feet of space.

To kill the following flying insects: Fruit Flies, Gnats and Small Flying Moths, dilute at the rate of 2.5 fluid ounces per gallon (19.82 mL/L) of water. Apply as a fog or fine mist (at approximately 2 fluid ounces per 1,000 cubic feet of space (2.08 ml/m<sup>3</sup>), directing the nozzle for maximum coverage and above livestock and poultry toward the ceiling and upper corners of the area being treated. For best results, close doors and windows before spraying, and keep them closed for 10 to 15 minutes. Applicator should vacate the treated area and ventilate it prior to returning. Sweep up and destroy fallen insects.

**DIRECTIONS FOR USE IN COMMERCIAL ANIMAL PREMISE AUTOMATIC MISTING SYSTEMS:** When using this product, installers and service technicians must comply with the license certification, or registration requirements of the state(s), tribe(s) or local authority(ies) where they are installed.

Do not apply when food, feed, and or water is present.

When applying via a remote activation device, do not apply when people and pets are present. If possible, when applying via automatic timer, set the timing for application when people and pets are unlikely to be present.

Direct nozzles to spray towards the target area and away from areas where people are typically present. Do not use in an evaporative cooling system. Do not use in misters located within 3 feet of air vents, air conditioner units or windows.

If used in a system with a reservoir tank for the end use dilution, the system reservoir tank must be locked. Securely attach the end use pesticide label and a dilution statement to the system reservoir tank in a weather protected area or plastic sleeve. The dilution statement must be phrased as follows: this container holds \_\_\_ parts PyGanic® Crop Protection EC 5.0II to \_\_\_ parts water.

This product must only be used in systems that have been calibrated to apply no more than the maximum application rate of .0008 lbs. a.i./1,000 cubic feet space sprays when non-domestic animals are present.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:**

Keep this product in its tightly closed original container, when not in use. Store in a cool, dry (preferably locked) area that is inaccessible to children and animals.

**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 container (or equivalent) promptly after emptying. 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. Offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Harmful if absorbed through skin. Harmful if swallowed. Causes moderate eye irritation. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are made of any waterproof material. If you want more options, follow the instructions for category E on an EPA chemical-resistance category selection chart.

Mixers, loaders, applicators, and other handlers must wear the following:

- long-sleeved shirt,
- long pants,
- shoes and socks, and
- chemical-resistant gloves.

In addition to the above PPE, applicators using hand held foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH-approved respirator with:

- a dust/mist filtering cartridge (MSHA/NIOSH approval number prefix TC-21C), or
- a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or
- a cartridge or canister with any R,P or HE filter.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

When handlers use aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides 40 CFR 170.240 (d) (4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.



EPA Reg. No. 1021-1772  
 EPA Est. Nos. 1021-MN-2<sup>A</sup>, 48498-CA-01<sup>B</sup>  
 Superscript is the first character of the lot number.  
 Rev. 0512-0713

**USER SAFETY RECOMMENDATIONS:**

Users should wash hands before, eating, drinking, chewing gum, using tobacco, or using the toilet.

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic organisms, including fish and invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through runoff. This product has a potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. 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 contaminate water when disposing of equipment wash-waters or rinsate.

**CAUTION PRECAUCIÓN**

**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 SWALLOWED:**

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-888-740-8712 for emergency medical treatment information.



- Provides rapid knockdown and kill of plant pests
- For use on growing crops
- Can be used on day of harvest
- Kills key livestock pests



KEEP OUT OF REACH OF CHILDREN

**CAUTION**

See inside for first aid and precautionary statements.

**GROUP 3A INSECTICIDE**

**GENERAL PRECAUTIONS AND RESTRICTIONS:**

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. Not for use in outdoor metered release devices. Keep unprotected persons out of treated areas until sprays have dried. Allow spray to dry before allowing adults, children or pets on treated areas. Do not wet plants to the point of runoff or drip. Do not apply more than 10 times per season. Do not reapply within 3 days except under extreme pest pressure. In case of extreme pest pressure, do not reapply within 24 hours. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Not for use in outdoor residential misting systems. Do not apply when food, feed, and or/water is present. Not for indoor use except in greenhouses. **SPRAY DRIFT MANAGEMENT FOR AGRICULTURAL CROPS:** Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interactions of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. Do not apply at wind speeds greater than 10 mph at the application site. Do not make any type of application into temperature inversions. Apply as a medium or coarser spray (ASABE standard 572).

**ADDITIONAL REQUIREMENTS FOR AERIAL APPLICATIONS:**

Do not release spray at a height greater than 10 feet above the ground or crop canopy. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Aerial applicators must consider flight speed and nozzle orientation in determining droplet size.

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

**ADDITIONAL REQUIREMENTS FOR GROUND APPLICATIONS:**

Do not release spray at a height greater than 4 feet above the ground or crop canopy.

**ADDITIONAL REQUIREMENTS FOR AIRBLAST APPLICATIONS:**

Direct sprays into the canopy.

Turn off outward pointing nozzles at row ends and when spraying outer rows.

**PESTICIDE RESISTANCE MANAGEMENT**

PyGanic® Crop Protection EC 5.0II contains a Group 3A insecticide. Insect biotypes with acquired resistance to Group 3A may eventually dominate the insect population if Group 3A insecticides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by PyGanic® Crop Protection EC 5.0II or other Group 3A insecticides. To delay insecticide resistance consider:

- Avoiding the consecutive use of PyGanic® Crop Protection EC 5.0II or other group 3A insecticides that have a similar target site of action, on the same insect species.
- Using tank mixtures or premixes with insecticides from a different target site of action Group as long as the involved products are all registered for the same use and have different sites of action.
- Basing insecticide use on a comprehensive IPM program.
- Monitoring treated insect population for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors, and/or manufacturer for insecticide resistance management and or IPM recommendations for the specific site and resistance pest problems.

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2.5M-0713

## 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 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 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 (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker 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 Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water), is:

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves, such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber or Viton;
- Shoes plus socks.

#### 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.

Do not enter or allow others to enter until vapors, mists, and aerosols have dispersed, and the treated area has been thoroughly ventilated.

Do not enter or allow others to enter until sprays have dried.

#### FOR USE ON:

Beefalo	Cattle – beef and milking	Elk	Hogs	Mules	Poultry	Sheep
Birds	Chickens	Emus	Horses	Ostrich	Pullets	Swine
Buffalo	Donkeys	Exotics	Lambs	Oxen	Quail	Turkeys
Calves	Ducks	Geese	Livestock	Pheasants	Ratites	
		Goats	Llamas	Ponies	Roosters	

#### TO KILL THE FOLLOWING INSECTS:

12-spotted Cucumber Beetles	Cabbage Maggots	Diamondback Larvae and Moths	Skeletonizers	Leafrollers	Potato Leafhoppers	Stink Bugs
Angoumois Grain Moths	Cankerworms	Dried Fruit Beetles	Grape Leafhoppers	Leaf tiers	Potato Tubeworms	Tarnished Plant Bugs
Ants (excluding fire and Pharaoh ants)	Carrot Weevils	Drugstore Beetles	Grape Mealy Bugs	Lice	Poultry Lice	Thrips
Aphids	Caterpillars	Earwigs	Grasshoppers	Loopers	Proba Bugs	Ticks
Apple Maggots	Caterpillars	Eastern Tent Caterpillars	Green Bugs	Lygus	Psyllids	Tobacco Moths
Armored Scales	Cheese Skippers	Elm Leaf Beetles	Green Peach Aphids	Mealy Bugs	Rice Weevils	Tomato Budworms
Armyworms	Cherry Fruit Flies	Greenhouse Thrips	Greenhouse Thrips	Mediterranean Flour Moths	Saltmarsh Caterpillars	Tomato Fruit Worms
Artichoke Plume Moths	Cigarette Beetles	Eriophyid Mites	Gypsy Moths (adults and larvae)	Mexican Bean Beetles	Saw-toothed Grain Beetles	Tomato Hornworms
Asparagus Beetles	Clover Mites	European Pine Tip Moths	Harlequin Bugs	Midges	Scales	Tomato Pinworms
Bagworms	Clover Weevils	Fire Worms	Harlequin Bugs	Midges	Tomato Russet Mite	Tomato Pinworms
Bean Beetles	Cockroaches	Flea Beetles	Helioliths spp.	Millipedes	Sharpshooters	Tussock Moths
Beet Armyworms	Codling Moths	Fleas	Horn Flies	Mites	Sheep "Tick" or Ked	Vine Mealy Bugs
Beetles	Colorado Potato Beetles	Forest Tent Caterpillars	House Flies	Moths	Shot Hole Borers	Vinegar Flies
Bermuda Grass Mirids	Confused Flour Beetles	Fruit Flies	House Flies	Mushroom Flies	Silverfish	Webworms
Billbugs	Corn Earworms	Fruit Tree	Imported Cabbageworms	Navel Orangeworms	Skipppers	Weevils
Blister Beetles	Crane Flies	Leaf Rollers	Indian Meal Moths	Olive Fruit Flies	Small Flying Moths	Western Yellow-striped Armyworms
Blow Flies	Crickets	Fruitworms	Japanese Beetles	Onion Maggots	Soft Scales	Whiteflies
Boll Weevils	Cross-striped Cabbageworms	Fungus Gnats	Katydidis	Orange Tortrix	Southern Chinch Bugs	Yellow Mealworms
Box Elder Bugs	Cucumber Beetles	Garden Symphylan	Lace Bugs	Pacific Flatheaded Borers	Sow Bugs	
Branch and Twig Borers	Dark Mealworms	Glassy Winged Sharpshooters	Leaf-footed Plant Bugs	Pear Psyllids	Spider Beetles	
Cabbage Loopers	Darkling Beetles (lesser meal worm)	Gnats	Leafhoppers	Pear Springtails	Springtails	
		Grain Mites	Leafminers	Pepper Weevils	Squash Bugs	
		Grape Leaf		Pink Bollworms	Stable Flies	

#### INDOOR AREAS for use in and around:

Greenhouses

#### OUTDOOR AREAS for use in and around:

Nurseries
Outdoor Growing Crops

#### GENERAL USE DIRECTIONS

**IMPORTANT:** It is recommended that the final spray mix be buffered to a pH of 5.5-7.0. Outside of this range pyrethrins can degrade and the product will lose effectiveness.

To avoid possible harm to honey bees and other beneficial insects, it is advisable to apply when the non-target insects are least active.

Pyrethrins degrade rapidly in sunlight. To ensure the best performance, coverage is key. Use spray equipment that will provide the best coverage and direct contact with as many insects as possible.

Kills only at time of application. Listed insect pests must be directly contacted to be effective.

**TANK MIX:** This product may be tank mixed with other insecticides, acaricides, fungicides, adjuvants, and wetting agents. This application should conform to accepted use precautions and directions for both products. Tank mix applications must be made in accordance with the more restrictive of label limitations and precautions. No label application rates may be exceeded. This product cannot be mixed with any product with label prohibitions against such mixing.

Prior to tank mixing, a compatibility test should be conducted using the proper proportions of products and water to ensure the physical compatibility of the mixture.

**IMPORTANT NOTE:** Plant safety is an important consideration when using insecticides in a greenhouse. However, it is not possible to evaluate the phytotoxicity of PyGanic® Crop Protection EC 5.0ll on numerous plant varieties that may react differently to insecticides in different growth stages or under varying environmental conditions. Before making widespread applications of PyGanic® Crop Protection EC 5.0ll or tank mix combinations, treat a limited number of plants and observe for phytotoxicity over a 10-day period.

#### DIRECTIONS FOR APPLICATION THROUGH IRRIGATION SYSTEMS (CHEMIGATION)

Apply this product only through sprinkler (including center pivot, lateral move, end tow, side [wheel] roll, traveler, big gun, solid set, or hand move) 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 the operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

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

Systems must be 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.

Constant agitation must be maintained in the chemical supply tank during the entire period of insecticide application. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of more dilute suspension per unit of time.

#### GROWING CROPS (OUTDOORS AND IN GREENHOUSES AND NURSERIES)

Apply 4.5 to 17 fluid ounces per acre by ground equipment in sufficient water for thorough coverage. This product may be applied by air at the rate of 4.5 to 17 fluid ounces per acre in a minimum of 20 gallons of water. Mix only enough for immediate use. Spraying should begin when insects first appear. Do not wait until plants are heavily infested. Repeat as needed but not more than once daily.

#### MAXIMUM APPLICATION RATES:

Field & Orchard – 0.05 lbs. a.i./acre or 17 fl. oz. of PyGanic 5.0 per acre.
0.0012 lb a.i. / 1,000 s.f.

Greenhouse space sprays – 0.0014 Lbs. a.i./acre

**ROOT AND TUBER VEGETABLES:** Including: Arracacha, Arrowroot, Purple Arrowroot, Japanese Artichoke, Jerusalem Artichoke, Garden Beets, Sugar Beets, Edible Burdock, Edible Cannn, Carrots, Cassava (bitter or sweet), Celeriac (celery root), Chayote (root), Chervil (turnip rooted), Chicory, Chufa, Dasheen, Ginger, Ginseng, Horseradish, Leren, Parsley (turnip rooted), Parsnip, Potato, Radish, Japanese Radish (Daikon), Rutabaga, Salsify, Black Salsify, Spanish Salsify, Sweet Potato, Tanier, Turmeric, Turnip, Yam (true), Yam Bean.

**LEAVES OF ROOT AND TUBER VEGETABLES:** Including: Garden Beet, Sugar Beet, Edible Burdock, Carrot, Cassava (bitter or sweet), Celeriac (celery root), Chervil (Turnip Rooted), Chicory, Dasheen (Taro), Parsnip, Radish, Japanese Radish (Daikon), Rutabaga, Black Salsify, Sweet Potato, Tanier, Turnip, Yam (true).

**BULB VEGETABLES:** Including: Garlic, Great-headed Garlic, Leek, Onion (bulb and green) Welch, Shallot.

**LEAFY VEGETABLES:** Including: Amaranth (Leafy Amaranth, Chinese Spinach, Tampala), Arugula, Cardoon, Celery, Chinese Celery, Celtuce, Chervil, Corn Salad, Chrysanthemum (edible-leaved), Chrysanthemum (garland), Cress (garden, water), Upland Cress (yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Fennel (Florence), Lettuce (head and leafy), Orach, Parsley, Purslane (garden & winter), Radicchio, Rhubarb, Spinach, Fine Spinach (Malabar, Ceylon), Spinach (New Zealand), Swiss Chard.

**BRASSICA (COLE) LEAFY VEGETABLES:** Including: Broccoli, Chinese Broccoli (Gai Lan), Broccoli raab (Rapini), Brussels Sprouts, Cabbage, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavallo broccoli, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens.

**LEGUME VEGETABLES (SUCCULENT OR DRIED):** Including: Adzuki Beans, Field Beans, Kidney Beans, Lima Beans, Moth Beans, Mung Beans, Navy Beans, Pinto Beans, Rice Beans, Runner Beans, Snap Beans, Tepary Beans, Urd Beans, Wax Beans, Asparagus Beans, Black-eyed Peas, Catjang, Chinese Longbeans, Cowpeas, Chowder Peas, Southern Peas, Yard-longbeans, Broad Beans, (Fava Beans), Chick Peas (Garbanzo Beans), Guar, Jack Beans (Sword Bean), Lablab Bean (Hyacinth Bean), Lentils, Peas (Garden Peas, Field Peas, Sugar Snap Peas, English Pea, Snow Pea), Pigeon Peas, Soybeans, Sweet Lupin Beans, White Lupin Beans, White Sweet Lupin, Sword Bean.

**FOLIAGE OF LEGUME VEGETABLES:** Including: Plant part of any legume vegetable included in the legume vegetable group that will be used as animal feed including any variety of Beans, Field Peas, Soybeans.

**FRUITING VEGETABLES:** Including: Eggplant, Ground Cherry, Okra, Pepinos, Pepper (Bell Pepper, Chili Peppers, Cooking Peppers, Pimentos, Sweet Peppers), Tomatillo, Tomatoes.

**CUCURBIT VEGETABLES:** Including: Balsam Apple, Balsam Pear (Bitter Melon), Chayote (fruit), Chinese Wax Gourd (Chinese preserving melon), Chinese Cucumber, Citron Melon, Cucumber, Gherkin, Edible Gourds, Melons (including hybrids, Cantaloupe, Casaba, Golden Pershaw Melon, Crenshaw, Honeydew Melons, Honey Balls, Mango Melon, Muskmelon, Persian Melon, Pineapple Melon, Santa Claus Melon, Snake Melon), Pumpkin, Squash (summer & winter), Watermelon (including hybrids).

**CITRUS FRUITS:** Including: Calamondin, Citrus Citron, Citrus Hybrids, Grapefruit, Kumquats, Lemons, Limes, Mandarin (Tangerine), Orange (sweet & sour), Pummelo, Satsuma Mandarin, (Citrus spp. Includes Chironja, Tangelos, Tangors).

**POME FRUITS:** Including: Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental Pear, Quince.

**STONE FRUITS:** Including: Apricot, Cherry (sweet & sour), Nectarine, Peach, Plum, Prune, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot.

**SMALL FRUITS AND BERRIES:** Including: Blackberry, Blueberry, Cranberry, Currant, Dewberry, Elderberry, Gooseberry, Grape, Huckleberry, Loganberry, Olallieberry, Raspberry (black & red), Strawberry, Youngberry.

**TREE NUTS:** Including: Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazel nut), Hickory nut, Macadamia Nut (Bush Nut), Pecan, Pistachio, Walnut, Black and English (Persian).

**ORIENTAL VEGETABLES:** Including: Acerola, Atemoya, Balsam pear (bitter melon), Carambola, Japanese Artichoke, Chinese Broccoli (Gai Lan), Chinese Cabbage (Bok Choy, Napa), Chinese Mustard Cabbage (Gai Choy), Dasheen, Ginger, Ginseng, Chinese Longbeans, Mung Beans, Citron Melon, Japanese Radish (Daikon), Chinese Spinach, Chinese Waxgourd, Cilantro, Citron Melon, Rambutan, Water Chestnut.

**SUBTROPICAL FRUITS:** Including: Avocado, Banana, Carob, Barbados Cherry, Cherimoya, Dates, Durian (Jackfruit), Feijoa, Figs, Guava, Kiwifruit, Lychee, Mango, Papaya, Passion Fruit, Persimmon, Pineapple, Pomegranate.

**CEREAL GRAINS:** Including: Barley, Buckwheat, Corn (sweet and field), Millet, Proso, Oats, Pearl Millet, Popcorn, Rice, Rye, Sorghum (Milo), Teosinte, Triticale, Wheat, Wild Rice.

**FORAGE, FODDER AND STRAW OF CEREAL GRAINS:** Including: Barley, Buckwheat, Corn (sweet and field), Millet, Proso, Oats, Pearl, Popcorn, Rice, Rye, Sorghum (milo), Teosinte, Triticale, Wheat, Wild Rice.

**GRASSES FOR SEED, FORAGE, FODDER AND HAY:** Including: any grass (Gramineal family, green or cured, except sugarcane and those listed in the cereal grains group) Pasture and Range Grasses, Grasses grown for hay and silage, Bermuda Grass, Bluegrass, Bromegrass, Fescue, Oat hay, Orchard Grass, Forage Sorghum, Sudan Grass, Timothy.

**NON-GRASS ANIMAL FEEDS:** Including: Alfalfa, Velvet Bean, Clover, Kudzu, Lespedeza, Lupine, Sainfoin, Trefoil, Crown Vetch, Milk Vetch.

**HERBS AND SPICES:** Including: Allspice, Angelica, Anise (anise seed), Star Anise, Annatto (seed), Balm (lemon balm), Basil, Borage, Burnet, Camomile, Caper buds, Caraway, Black Caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chicory, Chive, Chinese Chive, Cinnamon, Clary, Clove buds, Coriander (cilantro or Chinese parsley leaf), Coriander (cilantro seed), Costmary, Culantro (leaf), Culantro (seed), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Fennel (common), Florence Fennel (seed), Fenugreek, Gains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf), Lovage (seed), Mace, Marigold, Marjoram (includes sweet or annual marjoram, wild marjoram or oregano, and pot marjoram), Mustard (seed), Nasturtium, Nutmeg, Oregano, Mint, Paprika, Parsley (dried), Pennyroyal, Black Pepper, White Pepper, Poppy (seed), Rosemary, Rue, Saffron, Sage, Summer and Winter Savory, Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

#### For use as Livestock Spray

Pest	Application Rates	Remarks
To kill horn flies, house flies, mosquitoes and gnats	Dilute at the rate of 1.5 to 3 fluid ounces per gallon of water (12 to 24 ml/Liter of water) and apply to wet the hair thoroughly with particular attention to topline, underline, flanks, withers and other infested areas.	Repeat treatment at intervals of 5 to 12 days for small insect populations or as needed when flies are emerging in large numbers. Do not apply more than 1 time per day.
To kill stable flies, horse flies, and deer flies	Dilute at the rate of 2.5 to 4 fluid ounces per gallon of water (20 to 32 ml/L of water) and apply a quart per adult animal to wet the hair thoroughly with particular attention to the legs, flanks, barrel, topline and other body areas commonly attacked by these flies.	Repeat treatment each week as needed. Do not apply more than 1 time per day.
To kill face flies	Dilute at the rate of 2.5 fluid ounces per gallon of water (20 ml/L of water) and apply using spray which produces large wetting droplets. Apply to the face of the animal in the morning before releasing to pasture. Apply sufficiently to wet the face but not more than 1.5 fluid ounces (44 ml) of diluted solution per animal.	Repeat daily as needed. Do not apply more than 1 time per day.
To kill biting and sucking lice on cattle, horses, sheep, goats and hogs	Dilute at the rate of 1 quart with 60 gallons of water [1.5 fluid ounces with 2 gallons (6 ml/L of water)] and spray to thoroughly wet the hair of the animal including the head and brush of the tail.	Repeat treatment in 10 days to kill newly hatched lice. Do not apply more than 1 time per day.
To kill sheep "tick" or ked	Dilute at the rate of 1.5 to 3 fluid ounces per 4 gallons of water (3 to 6 ml/L of water) and thoroughly wet all portions of the body by dipping or by spraying with sufficient pressure and with a nozzle adjustment to give penetration of the wool.	Treat at a rate sufficient to wet the animal. Do not apply more than 1 time per day.
To kill fleas and ticks on livestock and to obtain protection against reinestation	Dilute at the rate of 9 fluid ounces per gallon (71ml/L) of water and wet the animal by dipping or spraying. This product may also be used for livestock quarters.	Do not spray pets. For best results against fleas and ticks animal quarters and bedding should be treated. Remove and destroy old bedding. To reduce infestation, thoroughly spray the animal's bedding and sleeping quarters. Put fresh bedding in quarters after spray has dried. Do not apply more than 1 time per day.

**ADDITIONAL CROPS:** Including: Artichoke, Asparagus, Avocado, Coffee, Cotton, Hops, Joboba, Mushroom, Okra, Olives, Peanuts, Pineapple, Rice, Safflowers, Sesame, Sugar Cane, Sunflower, Tea.

**TO KILL ANTS (EXCLUDING FIRE AND PHARAOH ANTS) ON ORCHARD FLOORS AND VINEYARD FLOORS:** Apply as a broadcast spray to the entire orchard or vineyard floor using ground spray equipment at 5 to 17 fluid ounces per acre in 25 or more gallons of water. For best results use the high rate for heavy infestations and the lower rate for light infestations.

Do not apply where weed growth or other obstructions would impede uniform coverage of the orchard or vineyard floor. Mow or chemically control weeds before the application. Foliar applications of PyGanic® Crop Protection EC 5.0ll may be made in addition to the orchard floor treatment.

**USE ON GREENHOUSE FRUIT, VEGETABLE, FLOWER AND FOLIAGE PLANTS:** Combine 16 to 32 fluid ounces with 100 gallons of water for applications with conventional sprayers or 7 to 15 ml (¼-½ of a fluid ounce) per gallon of water for applications with handheld or backpack sprayers. Apply the diluted product at the rate of 3 gallons/1,000 sq. ft.

Do not exceed Maximum application rate of .0036 lbs ai./1,000 sq. ft. or 1.18 fl. oz. of PyGanic® Crop Protection EC 5.0/1,000 sq. ft. Do not apply more than 1 time per day.

**FOR USE IN VEGETABLE AND TRUCK GARDENS:** For commercial production of listed crops to kill listed insects dilute 7 to 15 ml (¼-½ of a fluid ounce) of PyGanic® Crop Protection EC 5.0ll per gallon of water. Apply diluted solution with all types of agricultural sprayers, including compressed air sprayers or pump driven sprayers.