



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460-0001

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

July 1, 2008

Ms. Gail Kociemba, Registration Specialist  
McLaughlin Gormley King Company  
8810 Tenth Avenue North  
Minneapolis, MN 55427-4319

**Subject: Label Amendment, Change of Signal Word from "Warning" to "Caution" and Addition of Multiple Public Health Pests  
MGK® PyGanic® Crop Protection EC 5.0 II, EPA Reg. No. 1021-1772  
Your Submission Dated February 14, 2008**

Dear Ms. Kociemba:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable with the following provision(s):

General Statement:

1. Delete all text throughout the label marked with "strikethrough."
2. Delete all instances of "[such as]" and "but not limited to" throughout the proposed label.

Efficacy Review comment(s):

3. Delete all references to "bed bugs" and "mosquitoes." Acceptable efficacy (product performance) data must be submitted to add these insect pests back on this label.
4. Delete all references to "deer flies," "flies," "horse flies," "biting flies" and "Tabanidae." To add these insect pests back on this label, acceptable efficacy (product performance) data must be submitted on a species of fly from the family Tabanidae.
5. Delete all references to "flushing action" and "flushes" on the label.
6. Throughout the label, revise the word "control" to read "kill." To obtain control claims, acceptable residual data must be submitted.
7. Revise all references to "deer ticks" and "ticks" to read "brown dog ticks."
8. Revise "Kills Flying Insects" to read "Kills Listed Flying Insects."
9. Revise "Kills Crawling Insects" to read "Kills Listed Crawling Insects."
10. Revise all references to "ants" to read "ants (excluding fire and Pharaoh ants)."
11. Revise all references to "spiders" to read "spiders (excluding Brown Recluse spiders)."

Marketing Claims section comment(s):

- 12. Replace the marketing claim "Contains pyrethrum – a botanical insecticide derived from chrysanthemums." with: "Contains pyrethrins – a botanical insecticide derived from chrysanthemums."
- 13. Delete the marketing claim "Non-persistent in the environment." This is an implied safety claim.

Precautionary Statements, Hazard to Humans and Domestic Animals section comment(s):

- 14. Replace the 3<sup>rd</sup> sentence with: "Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet."
- 15. Insert the following text at the end of this section: "Wear long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves."

Directions for Use section comment(s):

- 16. Include the following statements in the "GENERAL USE DIRECTIONS FOR INDOOR APPLICATIONS" subsection: "Kills only at the time of application. Listed insect pests must be directly contacted to be effective."
- 17. Revise the subsection title currently listed as "FOR USDA INSPECTED FACILITIES" subsection to read "FOR FEDERALLY INSPECTED MEAT AND POULTRY PROCESSING FACILITIES."
- 18. In the 4<sup>th</sup> sentence of the "SPACE SPRAY IN FOOD AND NONFOOD AREAS OF LISTED INDOOR AREAS" subsection, replace the word "feed" with the word "feet."

Storage and Disposal Statement section comment(s):

- 19. Revise the subsection currently labeled as "STORAGE:" to read "PESTICIDE STORAGE:"
- 20. Replace the "CONTAINER DISPOSAL:" subsection with: "Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other approved State and Local procedures."

A copy of your label stamped "Accepted with Comments" is enclosed for your records along with hard copies of the efficacy and acute toxicity reviews for this product. Please submit two (2) copies of the final printed labeling, incorporating the above changes, before releasing the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing amended labeling constitutes accepting of these conditions. If you have any questions about this label review, please contact Mr. Carmen Rodia at (703) 306-0327 or via e-mail at [Rodia.Carmen@epa.gov](mailto:Rodia.Carmen@epa.gov).



Richard J. Gebken  
 Product Manager (10)  
 Insecticide Branch  
 Registration Division (7505P)

**Enclosures:** Copy of label stamped "Accepted with Comments"  
 Copy of Acute Toxicity Review, dated May 6, 2008  
 Copy of Efficacy Review, dated June 27, 2008

3 8 12



McLaughlin Gormley King Company

PyGanic® Crop Protection EC 5.0 II

ACCEPTED with COMMENTS In EPA Letter Dated July 1, 2008

For Organic Production

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 1021-1772



8810 Tenth Avenue N. / Minneapolis, Minnesota 55427-4319 U.S.A.

TELEPHONE (763-544-0341)

Table with 4 columns: Target Pest, Application Method, Usage/Target, and Additional Information. Rows include Kills Mosquitoes, Kills Biting Flies, Kills Fleas, Kills Ticks, Kills Spiders, Kills Stored Product Pests, Kills Flying Insects, Kills Crawling Insects, Kills Cockroaches, and Kills Ants.

ACTIVE INGREDIENT:

Pyrethrins a botanical insecticide

5.00%

OTHER INGREDIENTS

95.00%

100.00%

PYGANIC® - Registered trademark of McLaughlin Gormley King Company

KEEP OUT OF REACH OF CHILDREN

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

Table with 2 columns: Situation (IF SWALLOWED, IF IN EYES, IF ON SKIN OR CLOTHING) and First Aid Instructions.

Removed: "if inhaled" language

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information regarding medical emergencies or pesticide incidents, call 1-888-740-8712.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Removed: Avoid breathing vapors or spray mist

4 8 12

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

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

Applicators and other handlers must wear: coveralls over short-sleeved shirt and short pants; chemical-resistant gloves, such as, Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton; chemical-resistant footwear plus socks; chemical-resistant headgear for overhead exposure; chemical-resistant apron when cleaning equipment, mixing, or loading.

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.

**User Safety Recommendations:**

**Users should:**

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing/PPE immediately if pesticide gets inside, then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is highly toxic to fish. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift from treated areas may be hazardous to organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**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:

- Coveralls over short-sleeved shirt and short pants;
- Chemical-resistant gloves, such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton;
- Chemical-resistant footwear plus socks; and
- Chemical-resistant headgear for overhead exposure.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box 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.

Keep unprotected persons out of treated areas until sprays have dried.

Wear protective clothing when using or handling this product to help avoid exposure to eyes and skin. Eye protection, gloves, a long-sleeved shirt and long pants are recommended.

Allow spray to dry before allowing adults, children or pets on treated areas.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

INDOOR AREAS for use in and around: [such as]: This list of use sites was not on the previous Stamped Approved Label.

Aircraft (not aircraft cabins)	Dairies	Laboratories	Restaurants
Animal Areas and Quarters	Dairy Stalls and holding areas	Laundromats	Retail Stores
Animal Shelters	Day Care Centers	Lavatories	Rice Mills
Animal Control Centers	Delicatessens	Libraries	Schools
	Department Stores		Seed production facilities
			Seed warehouses
Apartments	Diners	Liquor Stores	Ships
Arcades	Dog Houses	Livestock Barns	Ship Holds
Assisted Living Facilities	Storage or Processing Areas that contain	Livestock Hauling Equipment	Smoke Shops
	Dried Fruit Products		
Attics	Drugstores	Loafing Sheds	Spice plants
			Spice production facilities
Auditoriums	Dumpsters	Locker Rooms	Sports Stadiums
Bakeries	Dwellings	Milk Rooms	Stables
Beverage Plants	Egg Processing Plants	Mills	Storage Bins (areas)
Barns	Factories	Mausoleums	Stores
Bars	False-Ceilings	Meat Packing Plants	Supermarkets
Basements	Food Processing Plants	Mess Halls	Swine Houses
Bathrooms	Food Storage Areas	Milking Parlors	Taverns
Boats	Freight containers	Mini Storage	Textile Mills and Warehouses
Bottling Plants	Frozen food plants	Mobile Canteens	Theaters
Breweries	Fruit Packing Sheds	Mobile Homes	Tobacco Factories
Brewery Warehouses	Funeral parlors		Tobacco Warehouses
Buildings	Garbage Bins	Mobile Canteens	Tool Sheds
Buses	Garbage Cans	Mobile Homes	Trains
Cabins	Garbage Compactors	Morgues	Transportation Equipment
Cabinets	Garbage Trucks	Mortuaries	Trucks
Cafeterias	Gas Stations	Motels	Truck Trailers
Campers	Grain Elevators	Movie Theaters	Tunnels
Canneries	Grain Harvesting and Handling Equipment	Museums	Universities
Casinos	Garages	Mushroom Processing Areas	USDA Inspected Facilities
Cattle Barns	Grain Mills	Nursing Homes	Utilities
Cattle Stalls	Granaries		
Churches	Grocery Stores	Office buildings	Utility Rooms
City Missions	Health Care Facilities	Other Public Buildings	Vending Machines
Circus Tents	Herb drying and processing facilities	Parking Garages	Veterinary Hospitals
	Herb warehouses		
Classrooms	Homes	Passenger Railroad Cars	Wall and Equipment voids
Closets	Horse Stables and Barns	Peanut Warehouses	Warehouses
Club Houses	Horse Trailers	Pool Halls	Washrooms
Coffee Shops	Hospices	Poultry Houses	Wheat Mills
Colleges	Hospitals	Poultry Plants	Wholesale Stores
Commercial Buildings	Hotels	Pounds	Wine Cellars
Communication Centers	Indoor Eating Establishments	Prisons	Wineries
Condominiums	Industrial Installations	Public Storages	Zoos
Concession Stands	Institution Dining Areas	Rabbit Processing Plants	
Court Houses	Institutions	Railroad Cars	
Crawl Spaces	Jails	Recreational Vehicles	
Crematoriums	Kennels	Research Animal Quarters	

OUTDOOR AREAS for use in and around: [such as]: This list of use sites was not on the previous Stamped Approved Label.

Alleys	Drive-In theaters	Manure Piles	Side Walks
Amphitheaters	Dumpsters	Nurseries	Stadiums
Amusement parks	Exterior of Homes and other	Outdoor Eating	Tennis Courts
	Buildings	Establishments	
Athletic Fields (baseball, football, soccer)	Fair Grounds	Outdoor Growing Crops	Trees, Shrubs, Flowers and Foliage
Back yards	Feedlots		Plants
Balconies	Front Yards	Parks	Truck Stops
Baseball Fields	Game Fields	Parking Lots	Urban Areas
Bleachers	Garbage Dumps	Patios	Underpasses
Bridges	Gardens	Playgrounds	Utility Rooms Outdoors
Car Washes	Gazebos	Racetracks	Weigh Stations
Campgrounds	Golf Courses	Ranges	Wild Animal Parks
Circuses	Grandstands	Recreation Areas	Wood Piles
Construction Sites	Greenhouses	Rest Areas	Zoos and other similar areas
Corrals	Junk Yards	Roadsides	
Courtyards	Kennels	Rooftops	
Curbs	Levees	Sanitary Sewers (Manholes)	
Drive-In Restaurants	Livestock Pasture	School Yards	
		Side yards	

FOR USE ON:

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

FOR THE CONTROL OF INSECTS: Including, but not limited to:

Ants	Darkling Beetles (lesser meal worm)	Horse Flies	Sharpshooters
Angoumois Grain Moths	Deer Flies	House Flies	Sheep "Tick" or Ked
Aphids	Deer Ticks	Imported Cabbageworms	Shore flies
Apple Maggots	Diamondback Larvae and Moths	Indian Meal Moths	Shot hole borers
Armored Scales	Dried Fruit Beetles	Japanese Beetles	Silverfish
Armyworms	Drugstore Beetles	Katydid	Skippers
Artichoke Plume Moths	Earwigs	Lace Bugs	Small Flying Moths
Asparagus Beetles	Eastern Tent Caterpillars	Leaf-footed plant bugs	Soft Scales
Beet Armyworms	Elm Leaf Beetles	Leafhoppers	Southern chinch bugs
Bagworms	Eriophyd Mites	Leafminers	Sow bugs
Bean Beetles	European Corn Borers	Leafrollers	Spiders
Beetles	European Pine Tip Moths	Leafiers	Spider Beetles
<del>Bed Bugs</del>	Face Flies	Lice	Springtails
Bermudagrass Mirids	Fall Webworms	Loopers	Squash bugs
Billbugs	False Chinch Bugs	Lygus	Stable Flies
Blister Beetles	Firebrats	Maggots	Stink Bugs
Blow Flies	Fire worms	Mealy Bugs	Tobacco Moths
Biting Flies	Fleas	Mediterranean Flour Moths	Tabanidae
Boll Weevils	Flea Beetles	Mexican Bean Beetles	Tarnished Plant Bugs
Boxelder Bugs	Flies	Midges	Thrips
Branch and Twig Borers	Forest Tent Caterpillars	Millipedes	Ticks
Cabbage Loopers	Fruit Flies	Mites	Tomato budworms
Cabbage Maggots	Fruit tree Leaf rollers	Mole crickets	Tomato bugs
Cadelles	Fruitworms	Mosquitoes	Tomato Fruit worms
Cankerworms	Fungus Gnats	Moths	Tomato Hornworms
Carrot Weevils	Garden Symphylan	Mushroom Flies	Tomato pinworms
Caterpillars	Glassy Winged Sharpshooters	Navel Orangeworms	Tomato Russet Mite
Chalcids	Gnats	Olive Fruit Flies	Tussock moths
Cheese Skippers	Grain Mites	Onion Maggots	Vinegar Flies
Cherry Fruit Flies	Grape Leafhoppers	Orange Tortrix	Vine mealy bugs
Cigarette Beetles	Grape Leaf Skeletonizers	Pacific flatheaded borers	
Clover Mites	Grape Mealy bugs	Pear Psyllids	Webworms
Clover Weevils	Grasshoppers	Pepper Weevils	Weevils
Cockroaches		Pink bollworms	Western Yellow-striped armyworms
12-spotted Cucumber Beetles	Green bugs	Potato Leafhoppers	Whiteflies
Codling Moths	Greenhouse Thrips	Potato Tuberworms	Yellow Mealworms
Colorado Potato Beetles	Green Fruit Worms	Poultry Lice	
Confused Flour Beetles	Green Peach Aphids	Proba bugs	
Corn Earworms	Gypsy Moths (adults & larvae)	Psyllids	
Crickets	Harlequin Bugs	Red Flour Beetles	
Crane Flies	Heliopsis spp.	Rice Weevils	
Cross-striped Cabbageworms		Saltmarsh caterpillars	
Cucumber Beetles	Horn Flies	Saw Toothed Grain Beetles	
Dark Mealworms	Hornworms	Scales	

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.

**USED ALONE:** Apply 4.5 to 18 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 18 fluid ounces per acre in a minimum of 5 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 required to maintain effective control. It is recommended that the final spray mix be buffered to a pH of 5.5 - 7.0.

**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 5.0<sub>fl</sub> 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 5.0<sub>fl</sub> 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, 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 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 18 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 18 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 required to maintain effective control.

PyGanic® Crop Protection EC 5.0<sub>fl</sub> may be used on most crops because its active ingredient is exempt from tolerances when applied to growing crops. The crop-grouping scheme used on this label was devised by the Environmental Protection Agency to expedite minor use pesticide registration. Each crop grouping on this label contains the phrase "including, but not limited to," and then lists a number of crops in each group. This wording allows the use of PyGanic® Crop Protection EC 5.0<sub>fl</sub> on crops that may not be specifically listed on this label (providing that the group to which the crop belongs is listed).

**ROOT AND TUBER VEGETABLES:** Including, but not limited to: Arracacha, Arrowroot, Purple Arrowroot, Japanese Artichoke, Jerusalem Artichoke, Garden Beets, Sugar Beets, Edible Burdock, Edible Canna, 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, Tanler, Turmeric, Turnip, Yam (true), Yam Bean.

**LEAVES OF ROOT AND TUBER VEGETABLES:** Including, but not limited to: 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, Tanler, Turnip, Yam (true).

**BULB VEGETABLES:** Including, but not limited to: Garlic, Great-headed Garlic, Leek, Onion (bulb and green) Welch, Shallot.

**LEAFY VEGETABLES:** Including, but not limited to: 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 (Melabar, Ceylon), Spinach (New Zealand), Swiss Chard.

**BRASSICA (COLE) LEAFY VEGETABLES:** Including, but not limited to: Broccoli, Chinese Broccoli (Gai Lan), Broccoli raab (Rapini), Brussel 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.

8 8 12

**LEGUME VEGETABLES (SUCCULENT OR ED):** Including, but not limited to: Adzuki Beans, Fava 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, Jackbean (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, but not limited to: 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, but not limited to: Eggplant, Ground Cherry, Okra, Pepinos, Pepper (Bell Pepper, Chili Peppers, Cooking Peppers, Pimentos, Sweet Peppers), Tomatillo, Tomatoes.

**CUCURBIT VEGETABLES:** Including, but not limited to: Balsam Apple, Balsam Pear (Bitter Melon), Chayote (fruit), Chinese Waxgourd (Chinese preserving melon), Chinese Cucumber, Citron Melon, Cucumber, Gherkin, Edible Gourds, Melons (including hybrids, Cantaloupe, Casaba, Golden Perhsaw 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, but not limited to: 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, but not limited to: Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental Pear, Quince.

**STONE FRUITS:** Including, but not limited to: Apricot, Cherry (sweet & sour), Nectarine, Peach, Plum, Prune, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot.

**SMALL FRUITS AND BERRIES:** Including, but not limited to: Blackberry, Blueberry, Cranberry, Currant, Dewberry, Elderberry, Gooseberry, Grape, Huckleberry, Loganberry, Olallie Berry, Rasperry (black & red), Strawberry, Youngberry.

**TREE NUTS:** Including, but not limited to: Almond, Beech Nut, Brazil Nut, Batternut, Cashew, Chestnut, Chinquapin, Filbert (hazel nut), Hickory nut, Macadamia Nut (Bush Nut), Pecan, Pistachio, Walnut, Black and English (Persian).

**ORIENTAL VEGETABLES:** Including, but not limited to: Acerola, Ateemoya, 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, but not limited to: Avocado, Banana, Carob, Barbados Cherry, Cherimoya, Dates, Durian (Jackfruit), Feijoa, Figs, Guava, Kiwifruit, Lychee, Mando, Papaya, Passion Fruit, Persimmon, Pineapple, Pomegranate.

**CEREAL GRAINS:** Including, but not limited to: Barley, Buckwheat, Corn (sweet and field), Millet, Proso, Oats, Pearl Millet, Popcorn, Rice, Rye, Sorghum (Milo), Teosine, Triticale, Wheat, Wild Rice.

**FORAGE, FODDER AND STRAW OF CEREAL GRAINS:** Including, but not limited to: Barley, Buckwheat, Corn (sweet and field), Millet, Proso, Oats, Pearl, Popcorn, Rice, Rye, Sorghum (milo), Teosine, Triticale, Wheat, Wild rice.

**GRASSES FOR SEED, FORAGE, FODDER AND HAY:** Including, but not limited to: 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, Sudangrass, Timothy.

**NON-GRASS ANIMAL FEEDS:** Including, but not limited to: Alfalfa, Velvet Bean, Clover, Kudzue, Lespedeza, Lupine, Sainfoin, Trefoil, Crown Vetch, Milk Vetch.

**HERBS AND SPICES:** Including, but not limited to: Allspice, Angelica, Anise (anise seed), Anise [star], Annatto (seed), Balm (lemon balm), Basil, Borage, Burnet, Camomile, Caper buds, Caraway, Caraway [black], Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chicory, Chive, Chive [Chinese], Cinnamon, Clary, Clove buds, Coriander (cilantro or Chinese parsley) (leaf), Coriander (cilantro) (seed), Costmary, Cilantro (leaf), Cilantro (seed), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Fennel (common), Fennel [Florence] (seed), Fenugreek, Grains 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, Pepper [black], Pepper [white], Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory [summer and winter], Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

**ADDITIONAL CROPS:** Including, but not limited to: Artichoke, Asparagus, Avocado, Coffee, Cotton, Hops, Jojoba, Mushroom, Okra, Olives, Peanuts, Pineapple, Rice, Safflowers, Sesame, Sugar Cane, Sunflower, Tea.

**TO KILL 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 18 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 5.0 may be made in addition to the orchard floor treatment.

9 7 12

**ORNAMENTALS:** Including, but not limited to African Violet, Ageratum, Aster, Azalea, Begonia, Calla, Clivia, Calceolaria, Calendula, Calla, Camellia, Carnation, Ceanothus, Cineraria, Chrysanthemum, Coleum, Cyclamen, Cypress, Daffodil, Dahlia, Delphinium, Dogwood, Elm, Eucalyptus, Fern, Ficus, Foliage Plants, Fuchsia, Gardenia, Geranium, Gladiolus, Gloxinia, Gypsophila, Holly, Hyacinth, Hydrangea, Iris, Lily, Maidenhair Fern, Marigold, Narcissus, Palm, Pansy, Peony, Pelargonium, Petunia, Philodendron, Phlox, Pine, Pyracantha, Rhododendron, Roses, Rubber Plant, Snapdragon, Sweet Pea, Tulips, Viburnum, Wandering Jew, Yew, Zinnia and Andromeda, Arborvitae, Ash, Beech, Birch, Boxwood, Cotoneaster, Crabapple, Euonymus, Fir, Firethorn, Forsythia, Hawthorn, Hemlock, Hickory, Honey Locust, Horse Chestnut, Juniper, Larch, Laurel, Lilac, Linden, Mimosa, Myrtle, Oak, Pine, Privet, Tulip Tree, Viburnum, Willow.

**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 (1/4 - 1/2 of a fluid ounce) per gallon of water for applications with handheld or backpack sprayers.

**FOR USE OUTDOORS ON TREES, SHRUBS, FLOWERS AND FOLIAGE PLANTS:** Combine 16 to 32 fluid ounces of PyGanic® Crop Protection EC 5.0<sub>II</sub> with 100 gallons of water for applications with conventional sprayers or 16 to 32 fluid ounces of PyGanic® Crop Protection EC 5.0<sub>II</sub> with 10 gallons of water for applications with low volume mist blowers or 7 to 15 ml (1/4 - 1/2 of a fluid ounce) per gallon water for applications with handheld or backpack sprayers.

**FOR USE ON AND AROUND LISTED OUTDOOR AREAS:** To control insects on Turf, Ornamental Plants, Gardens, Landscaping, Foundation Walls and Perimeters mix 7 to 15 ml (1/4 to 1/2 of a fluid ounce) of PyGanic® Crop Protection EC 5.0<sub>II</sub> per gallon of water for applications with compressed air sprayers or pump driven sprayers.

**FOR USE IN VEGETABLE AND TRUCK GARDENS:** For commercial production of listed crops to control listed insects dilute 7 to 15 ml of PyGanic Crop Protection EC 5.0<sub>II</sub> per gallon of water. Apply diluted solution with all types of agricultural sprayers, including but not limited to, compressed air sprayers or pump driven sprayers.

**USE INDOORS ON TREES, SHRUBS, FLOWERS AND FOLIAGE PLANTS:** Combine 16 to 32 fluid ounces of PyGanic® Crop Protection EC 5.0<sub>II</sub> with 100 gallons of water for applications with conventional sprayers or 7 to 15 ml (1/4 to 1/2 of a fluid ounce) of PyGanic® Crop Protection EC 5.0<sub>II</sub> per gallon of water for applications with handheld or backpack sprayers.

**USE WITH HYDROPONICALLY GROWN VEGETABLES AND ORNAMENTALS**

**AS A WATER SYSTEM TREATMENT:** To control aquatic Diptera larvae, apply PyGanic® Crop Protection EC 5.0<sub>II</sub> to the water at the rates outlined in the following table:

Pyrethrins Concentration	ml of PyGanic® Crop Protection EC 5.0 <sub>II</sub>	Gallons of Water
0.1 ppm	80	10,000
0.01 ppm	8.0	10,000
0.001 ppm	0.80	10,000

**\*FOR USE ON HARVESTED FRUITS AND VEGETABLES:** Including, but not limited to: Apples, Blackberries, Blueberries, Boysenberries, Cherries, Crabapples, Currants, Dewberries, Figs, Gooseberries, Grapes, Guavas, Loganberries, Mangoes, Muskmelons, Oranges, Peaches, Pears, Peas, Pineapples, Plums, Raspberries, Tomatoes.

**\*DIRECT SPRAY TO FRUITS IN BASKETS, ON TRUCKS OR IN PROCESSING PLANTS:** To kill *Drosophila* spp., *Tephritid* spp., Fruit Flies, Vinegar Flies and other nuisance pests, dilute this concentrate at the rate of 1 part with 900 parts water (1 pint with 125 gallons of water or 5 ml with 10 pints of water). Thoroughly mix the emulsion in the spray tank and treat as follows:

- 1) Apply liberally to fruits and vegetables in baskets, on trucks and in plants. Use sprayers at a high pressure for applying at the rate of five or six pints of diluted spray to a 2-ton load of produce. Direct the spray for maximum coverage of the baskets or hampers. It is important to spray between and beneath the containers.
- 2) Spray the raw stock stacked in the yard.
- 3) Dip baskets in the diluted spray, after dumping the produce to kill adhering larvae and pupae.

**\*NOT REGISTERED FOR THIS USE IN THE STATE OF CALIFORNIA**

**GENERAL USE DIRECTIONS FOR INDOOR APPLICATIONS:**

Remove pets and birds and cover fish aquariums before spraying.

Do not apply this product in patient rooms or in any rooms while occupied by the elderly or infirm. Patients should be removed prior to treatment. If application is done as a surface spray, patients may re-enter once the spray has dried. If application is done as a space spray, the rooms should be ventilated for two hours after spraying. Do not return patients to room until after ventilation.

Do not apply in institutions (including libraries, schools, sports facilities etc.) in the immediate area where occupants are present. Do not apply to classrooms while in use. Vacate rooms prior to treatment. If application is done as a surface spray, occupants may re-enter once the spray has dried. If application is done as a space spray, rooms should be ventilated for two hours after spraying. Do not allow occupants to enter room until after ventilation.

**FOOD AREA USE:** Avoid contamination of food or feedstuffs. Do not apply directly to food. Do not apply space spray while food processing is underway. Foods should be removed or covered during treatment. All food processing surfaces and equipment should be covered or washed with an effective cleaning compound followed by a potable water rinse. In the home all food processing surfaces, dishes and utensils should be covered during treatment or thoroughly washed before use.

10 8 12

**USE AS A SURFACE SPRAY IN LISTED INDOOR AREAS:** To control accessible, exposed stages of listed crawling insects, dilute 1 - 3 fluid ounces of concentrate with one gallon of water, mix well and apply as a coarse wetting spray at the rate of 1 gallon of spray mixture per 750 square feet of surface. To ensure maximum control of listed crawling insects, spray thoroughly into all cracks, moldings, crevices, walls, floors and surfaces of bins, storage and handling areas. Particular attention should be paid to areas where moisture collects such as drains, sinks, and water pipes and around the base of heavy machinery and equipment, contacting as many insects as possible. To kill ANTS spray directly into nests, along trails, and directly on all ants observed.

Except in Federally inspected meat and poultry plants, food processing operations may continue when this product is applied as a surface spray with care and in accordance with the directions and precautions given above.

**Dilution Table for Surface Spray**

Fluid ounces of Concentrate Per Gallon of Solution	Pounds of Pyrethrum Per Gallon of Solution.	Percent Pyrethrins in Solution.
1	0.0032	0.039%
2	0.0064	0.078%
3	0.0096	0.118%
4	0.0128	0.159%
5	0.0160	0.200%
6	0.0192	0.242%
7	0.0224	0.284%
8	0.0256	0.328%
12	0.038	0.508%
16	0.051	0.702%
22	0.070	1.020%

**FOR USDA INSPECTED FACILITIES:** To kill accessible, exposed stages of listed crawling insects, dilute 9 fluid ounces with one gallon of water and apply at the rate of 1 gallon to 750 square feet, paying special attention to force the spray into all cracks and crevices.

**SPACE SPRAY IN FOOD AND NONFOOD AREAS OF LISTED INDOOR AREAS:** For use in mechanical fogging or spraying equipment to kill accessible stages of listed FLYING AND CRAWLING INSECTS. Close room and shut off all air conditioners or ventilating equipment. Dilute at the rate of 1 part concentrate into 1-8 parts water (see table below) and mix well. Apply at the rate of 1 fluid ounce of diluted solution per 1000 cubic feet of space, filling the room with mist. Direct the space treatment upward and whenever practical, keep doors and windows closed for at least 30 minutes after application. Vacate treated area and ventilate before re-entry.

This concentrate may also be diluted with oil. If the product is used in a certified organic facility, check with certification regulations regarding allowed oils. Any oil should also meet Federal Food Additive Regulation requirements as defined by CFR Title 21. Conduct a small jar compatibility test by mixing a small amount of oil and concentrate and observe the physical compatibility of the mixture. Dilute at the rate of 1 part of concentrate with up to 8 parts oil. Apply at the rate of 1 fluid ounce of diluted solution per 1000 cubic feet of space.

When this product is applied as a space spray in food processing or food handling establishment applications should be confined to time periods when the plant is not in operation.

**Dilution Table for ULV Foggers**

Dilution Ratio:		Fluid ounces of Concentrate Per ounce of solution volume	Fluid Ounces of water per ounce of solution volume	Pounds of Pyrethrum Per 1,000 cu. ft. when applied at 1 fl oz per 1000 cu. ft.	Percent Pyrethrins in Solution
Concentrate	Water				
Undiluted		1.00	0.00	0.0032	5.00%
1	1	0.50	0.50	0.0016	2.47%
1	2	0.33	0.67	0.0011	1.65%
1	3	0.25	0.75	0.00101	1.23%
1	4	0.20	0.80	0.00064	0.99%
1	8	0.11	0.89	0.00035	0.547%

**\*FOR USE ON SWEET POTATOES IN STORAGE:** To kill Fruit Flies and Vinegar Flies, dilute this concentrate at 1 part to 14 parts water (9 fluid ounces with one gallon of water). Apply as a space fog with a mechanical fogger capable of producing particles of aerosol size at the rate of 1 gallon diluted spray per 100,000 cubic feet of space. Apply only when flying insects are present. Several applications may be necessary during periods of heavy infestation, but do not make more than 10 applications.

**\*FOR USE ON STORED PRODUCTS:** The product can be used to kill accessible stages of listed insects on the following stored commodities: Almond Nutmeat and Shells, Barley, Beans, Birdseed, Buckwheat, Cocoa Beans, Corn, Cottonseed, Dried Apricots, Dried Fruit, Dried Prunes, Figs, Flax, Grain Nuts, Oats, Peanut, Pistachio, Raisins, Rice, Rye, Sorghum, Tobacco, Wheat, and Walnut Nutmeat and Shells held in storage.

**\*DRIED FRUIT PRODUCTS IN STORAGE OR BEING PROCESSED:** To kill stored product pests including but not limited to the Dried Fruit Beetle and Saw-Toothed Grain Beetle. Remove and destroy infested products. Dilute concentrate at the rate of 1 part concentrate to 8 parts water and mix well. Disperse the solution as a fine mist in the air above the trays and shelves. Do not apply to fruit directly. If the solution is applied as a space spray, use one ounce diluted spray per 1000 cubic feet of space. Repeat application at this dosage in any given month. Leave the room closed for one hour. Do not remain in treated areas and ventilate the area before re-entry. Sweep up and destroy fallen insects.

11 7 12

**\*ON ALMONDS, PEANUTS, PISTACIOS AND WALNUTS IN BULK OR IN BAGS:** To kill stored product insects including, but not limited to: Almond Moths, Angoumois Grain Moths, Ants, Cadelles, Cigarette Beetles, Confused Flour Beetles, Drugstore Beetles, Flat Grain Beetles, Granary Weevils, Indian Meal Moths, Lesser Grain Borers, Maize Weevils, Mediterranean Flour Moths, Merchant Grain Beetles, Red Flour Beetles, Rice Weevils, Rusty Grain Beetles, Saw-toothed Grain Beetles and Square-necked Grain Beetles, dilute 2.0 fluid ounces of PyGanic® Crop Protection EC 5.0<sub>fl</sub> per gallon of water and apply as a coarse wet spray over the top of stored nuts or the outside surface of stacked bagged nuts at the rate of 4 gallons per 1000 square feet. Apply at weekly intervals for about 6 weeks and then at 15-day intervals. The first two applications should be applied at the rate of 4 gallons per 1000 square feet and subsequent treatments should be applied at the rate of 2 gallons per 1000 square feet.

**\*NOT REGISTERED FOR THIS USE IN THE STATE OF CALIFORNIA**

**TREATMENT OF STORED GRAIN AND SEED AREAS:** For best results to control stored product pests in grain and seed storage areas and stored grain and seed, treat the area when it is empty of product, as a protectant applied as commodity is put into storage, and as a surface spray once it is in storage.

**FOR USE IN STORAGE SITES:** This concentrate can be used to treat grain and seed in warehouse bins and trucks, cargo ships, mills, bin hoppers, elevators and conveying equipment as a clean up prior to using them for storage. In mills and elevators, all grain-infested accumulations should be removed from the bin hoppers. All storage areas and conveying equipment should be thoroughly cleaned by sweeping out the waste grain, cobwebs and other debris from the walls and rafters as well as on the floor and door frames with special attention to material lodged in the cracks and crevices. All debris should be removed and burned to kill eggs and insects that might be present.

For farms, particular attention should be given to cleaning up around the used feed and grain bags, grain residues from wagons, harvesting equipment and feed troughs. Newly harvested grain should not be placed in the same bin with carry-over grain, and all carry-over grain stocks that are not treated with grain protectant should be fumigated. These cleaning operations should be done within two or three weeks before harvest.

After above sanitation measures have been employed, spray all areas prior to use for storage with 1 part to 22 parts water (6 fluid ounces with one gallon of water) up to 1 part to 8 parts (1 pint with one gallon of water). Apply at the rate of one gallon per 750 square feet on walls, floors, ceilings and partition boards of bins, paying particular attention to forcing the spray into all cracks and crevices.

**\*FOR USE AS A GRAIN PROTECTANT:** This concentrate when diluted with water and sprayed directly on grains will effectively protect the grain against grain storage insects for a full season or approximately 8 months. Dilute at the rate of 1 part to 22 parts water (6 fluid ounces with one gallon of water). Thoroughly mix the emulsion and apply at the rate of 5 gallons per 1000 bushels of grain as it is carried along a belt or as it enters the auger or elevator. This concentrate may be used in combination with a registered fumigant for use on heavily infested stored products

Monthly inspections should be made. If the top 2 or 3 inches are infested, re-treat applying at the rate of 2 gallons of diluted material per 1000 bushels of stored product.

**\*SURFACE TREATMENT OF STORED GRAIN AND SEED:** To kill Indian Meal Moths, Angoumois Grain Moths and Mediterranean Flour Moths, monthly inspections should be made after the grain is placed in storage. If the top two or three inches are infested, dilute 1 part PyGanic® Crop Protection EC 5.0<sub>fl</sub> with 14 parts of water and apply at the rate of 2 gallons per 1000 square feet of grain. Rake the mixture into the grain to a depth of 4 inches.

**\*NOT REGISTERED FOR THIS USE IN THE STATE OF CALIFORNIA**

**FOR USE ON LISTED ANIMALS:**

- 1) To kill and repel Horn Flies, House Flies, Mosquitoes and Gnats, dilute at the rate of 1.5 to 3 fluid ounces per gallon of water and apply to wet hair thoroughly, paying 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.
- 2) To kill and repel stable flies, horse flies, and deer flies, dilute at the rate of 2.5 to 4 fluid ounces per gallon of water and apply at a quart per adult animal to wet hair thoroughly, paying particular attention to legs, flanks, barrel, topline and other body areas commonly attacked by these flies. Repeat treatment each week as needed.
- 3) To kill and repel face flies dilute at the rate of 2.5 fluid ounces per gallon of water and apply using spray which produces large wetting droplets. Apply to face of animal in the morning before releasing to pasture. Apply sufficiently to wet the face but not more than 1-1/2 ounces of spray solution per animal. Repeat daily as needed.
- 4) To kill biting and sucking lice on livestock, dilute at the rate of 1 quart with 60 gallons of water (1.5 fluid ounces with 2 gallons) and spray to thoroughly wet hair of animal, including the head and brush of the tail. Repeat treatment in 10 days to kill newly hatched lice.
- 5) To kill poultry lice, using a dilution of 2.5 to 4 fluid ounces of concentrate per gallon 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.
- 6) To kill bedbugs and mites on poultry and in poultry houses, dilute at the rate of 2.5 to 4 fluid ounces per gallon of water and spray crevices of roost poles, cracks in walls and cracks in nests where the bedbugs and mites hide. This should be followed by spraying over the birds with a fine mist.
- 7) To kill sheep "Tick" or Ked, dilute at the rate of 1.5 to 3 fluid ounces per 4 gallons of water and thoroughly wet all portions of the body by dipping or spraying with sufficient pressure and with a nozzle adjustment to give penetration of the wool. Treat at a rate sufficient to wet the animal.
- 8) To kill fleas and ticks on livestock and to obtain protection against reinfestation, dilute at the rate of 9 fluid ounces per gallon of water and wet the animal by dipping or spraying. This product may also be used for livestock/pet quarters. Do not spray pets. For best results against fleas and ticks on dogs and cats the kennels and/or animal quarters and bedding should be treated. Remove and destroy pet's old bedding. To reduce infestation, thoroughly spray the animal's bedding and sleeping quarters. Also spray the entire inside surface of dog houses. Put fresh bedding in pet's quarters after spray has dried. Also treat dogs and cats [pets] with a registered flea and tick control product before allowing them to reenter treated area.

12 8 12

- 9) To kill adult darkling beetle (lesser meal worm) in poultry houses, dilute 2.0 – 5.0 teaspoons (10 – 25 ml) of PyGanic® Crop Protection EC 5.0<sub>II</sub> 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 square feet. Do not contaminate food/feed or water. For maximum effectiveness, treatments should coincide with each growout or sanitation procedure. 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 up and 1-4 feet out from the foundation.

**FOR USE IN BARNs, DAIRIES, MILKING PARLORS, MILKING ROOMS AND POULTRY HOUSES:** To kill flying insects including, but not limited to: Flies, Fruit Flies, Mosquitoes, Gnats, Wasps, Hornets and Small Flying Moths, dilute at the rate of 2.5 fluid ounces per gallon of water. Apply as a fog or fine mist (at approximately 2 fluid ounces per 1000 cubic feet of space), 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.

**STORAGE AND DISPOSAL**

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

**STORAGE:** Store in a cool, dry place. Keep container closed.

**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:** Triple rinse (or equivalent) and offer for recycling or reconditioning, or dispose of in a sanitary landfill or by other procedures approved by State and Local authorities.

Net Contents \_\_\_\_\_  
 Manufactured by:  
**Mc LAUGHLIN GORMLEY KING COMPANY**  
 8810 Tenth Avenue North  
 Minneapolis, MN 55427

EPA Reg. No. 1021-1772

EPA Est. No. 1021-MN-2