

1021-1772

09-22-2009

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

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

September 22, 2009

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

**Subject: Amended Label, Response to EPA Letter of July 1, 2008, Updates to Precautionary Statements & Change of Signal Word from Warning to Caution  
MGK® PyGanic® Crop Protection EC 5.0<sub>II</sub>, EPA Reg. No. 1021-1772  
Your Submissions Dated June 15, 2009 and September 3, 2009**

Dear Ms. Frugis:

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."

Efficacy Review comment(s): To facilitate inclusion of missing comments included in the June 27, 2008 efficacy review (copy enclosed) completed for this product, incorporate the following changes:

2. On page 1 of 10, delete the marketing claim "Flushes insects and mites from hiding."
3. On page 6 of 10, revise the section header "TO KILL ANTS ON ORCHARD FLOORS and Vineyard Floors:" to read "TO KILL ANTS (EXCLUDING FIRE AND PHARAOH ANTS) ON ORCHARD FLOORS and Vineyard Floors:"
4. On page 8 of 10, under the section header starting with "\*ON ALMONDS, PEANUTS,...," revise the listing for "Ants" on the 2<sup>nd</sup> line to read "Ants (excluding fire and Pharaoh ants)."
5. On page 10 of 10, under the section header starting with "FOR USE IN BARNs, DAIRIES, ...," delete the listing for "Flies" at the beginning of the 2<sup>nd</sup> sentence.

Storage and Disposal section comment(s):

6. Replace the 3 existing subsections in the "STORAGE AND DISPOSAL" subsection with:

"PESTICIDE STORAGE: Store in a cool, dry place in an 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.

[For containers with capacities equal to or less than 5 gallons:]

[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 rinse 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 for reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities."

Storage and Disposal section comment(s), continued:

"[For containers with capacities greater than 5 gallons:]

[Triple rinse as follows: Empty the remaining contents into the application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. 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."

A copy of your label stamped "Accepted with Comments" as well as a hard copy of the efficacy review previously completed for this product are enclosed for your records. 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).

Sincerely yours,

*FOR* 

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

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

001021-01772 D419236 & D420266



**McLaughlin  
Gormley King  
Company**

**PyGanic® Crop Protection EC 5.0 II**

**ACCEPTED  
With COMMENTS  
In EPA Letter Dated:**

~~For Organic Production~~

*September 22, 2009*

**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)

|  |                     |  |   |
|--|---------------------|--|---|
| Kills Biting Flies                           | Flushing Action     | Can be used on day of harvest  | Contains pyrethrins – a botanical insecticide derived from chrysanthemums |
| Kills Fleas                                  | Quick Knockdown     | One gallon treats up to 28 acres   | For use in food handling, processing and storage areas                    |
| Kills Brown Dog Ticks                        | Fast Acting         | For Indoor and Outdoor Uses  | For use in Barns, Dairies and Poultry Houses                              |
| Kills Spiders (except Brown Recluse Spiders) | Effective ULV Spray | This product can be sprayed at any season of the year  | For use on growing crops and ornamentals                                  |
| Kills Stored Product Pests                   | Contact Spray       | Provides rapid knockdown & kill of plant pests<br><del>Flushes insects and mites from hiding</del> | Can be tank mixed with other insect control products                      |
| Kills Listed Flying Insects                  | Space Spray         | For use on over 200 fruits and vegetables  | For use in Restaurants  |
| Kills Listed Crawling Insects                | Area Spray          | Kills more than 100 insects  | Non-flammable   |
| Kills Cockroaches                            | In Poultry Houses   | Kills Key Livestock Pests  | Low odor  |
| Kills Ants (excluding fire and Pharaoh ants) | On Poultry          | For use on Livestock   | Non-corrosive to spray equipment  |

**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   |  |
|---|--|
| <b>IF SWALLOWED:</b>  | <ul style="list-style-type: none"> <li>Call poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul> |
| <b>IF IN EYES:</b>  | <ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>  |
| <b>IF ON SKIN OR CLOTHING:</b>  | <ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>  |
| 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. |  |

**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 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.

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**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: -long-sleeved shirt and long pants; chemical-resistant gloves, such as, Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton; shoes plus socks.

~~Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep PPE 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 thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put 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:

- 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**

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:

|                                |   |                             |                              |
|--------------------------------|---|-----------------------------|------------------------------|
| Aircraft (not aircraft cabins) | Dairies<br>Dairy Stalls and holding areas | Laboratories                | Restaurants                  |
| Animal Areas and Quarters      | Day Care Centers                          | Laundromats                 | Retail Stores                |
| Animal Shelters                | Delicatessens                             | Lavatories                  | Rice Mills                   |
| Animal Control Centers         | Department Stores                         | Libraries                   | Schools                      |
| Apartments                     | Diners                                    | Liquor Stores               | Seed production facilities   |
| <del>Arcades</del>             | <del>Dog Houses</del>                     | <del>Livestock Barns</del>  | <del>Seed warehouses</del>   |
| Assisted Living Facilities     | Storage or Processing Areas that contain  | Livestock Hauling Equipment | Ships                        |
| Attics                         | Dried Fruit Products                      |                             | Ship Holds                   |
| Auditoriums                    | Drugstores                                | Loafing Sheds               | Smoke Shops                  |
| Bakeries                       | Dumpsters                                 | Locker Rooms                | Spice plants                 |
| Beverage Plants                | Dwellings                                 | Milk Rooms                  | Spice production facilities  |
| Barns                          | Egg Processing Plants                     | Mills                       | Sports Stadiums              |
| Bars                           | Factories                                 | Mausoleums                  | Stables                      |
| Basements                      | False-Ceilings                            | Meat Packing Plants         | Storage Bins (areas)         |
| Bathrooms                      | Food Processing Plants                    | Mess Halls                  | Stores                       |
| Boats                          | Food Storage Areas                        | Milking Parlors             | Supermarkets                 |
| Bottling Plants                | Freight containers                        | Mini Storage                | Swine Houses                 |
| Breweries                      | Frozen food plants                        | Mobile Canteens             | Taverns                      |
| Brewery Warehouses             | Fruit Packing Sheds                       | Mobile Homes                | Textile Mills and Warehouses |
| Buildings                      | Funeral parlors                           |                             | Theaters                     |
| Buses                          | Garbage Bins                              | Mobile Canteens             | Tobacco Factories            |
| Cabins                         | Garbage Cans                              | Mobile Homes                | Tobacco Warehouses           |
| Cabinets                       | Garbage Compactors                        | Morgues                     | Tool Sheds                   |
| Cafeterias                     | Garbage Trucks                            | Mortuaries                  | Trains                       |
| Campers                        | Gas Stations                              | Motels                      | Transportation Equipment     |
| Canneries                      | Grain Elevators                           | Movie Theaters              | Trucks                       |
| Casinos                        | Grain Harvesting and Handling Equipment   | Museums                     | Truck Trailers               |
| Cattle Barns                   | Garages                                   | Mushroom Processing Areas   | Tunnels                      |
| Cattle Stalls                  | Grain Mills                               | Nursing Homes               | Universities                 |
| Churches                       | Granaries                                 |                             | USDA Inspected Facilities    |
| City Missions                  | Grocery Stores                            | Office buildings            | Utilities                    |
| Circus Tents                   | Health Care Facilities                    | Other Public Buildings      | Utility Rooms                |
|                                | Herb drying and processing facilities     | Parking Garages             | Vending Machines             |
|                                | Herb warehouses                           |                             | Veterinary Hospitals         |
| 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:

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

FOR USE ON:

|         |     |           |         |
|---------|-----|-----------|---------|
| Beefalo | Elk | Livestock | Pullets |
|---------|-----|-----------|---------|

Birds  
Buffalo  
Calves  
Cattle – beef and milking  
Chickens  
Donkeys  
Ducks

Emu  
Exotics  
Geese  
Goats  
Hogs  
Horses  
Lambs

Llamas  
Mules  
Ostrich  
Oxen  
Pheasants  
Ponies  
Poultry

Quail  
Ratites  
Roosters  
Sheep  
Swine  
Turkeys

**TO KILL THE FOLLOWING INSECTS:**

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

**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 (333 ml to 1,331 ml/Ha) 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 (333 ml to 1,331 ml/Ha) in a minimum of 5 gallons (18.9L) 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. 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 (333 ml to 1,331 ml/Ha) 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 (333 ml to 1,331 ml/Ha) in a minimum of 20 gallons (75.6L) 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.

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: 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, 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 (Melabar, Ceylon), Spinach (New Zealand), Swiss Chard.

**BRASSICA (COLE) LEAFY VEGETABLES:** Including: 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.

**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, Jackbean (Sword Bean), Lablab Bean, Jacinth 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 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: 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, Olallie Berry, 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, 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: Avocado, Banana, Carob, Barbados Cherry, Cherimoya, Dates, Durian (Jackfruit), Feijoa, Figs, Guava, Kiwifruit, Lychee, Mando, 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), Teosine, 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), Teosine, 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, Sudangrass, Timothy.

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

**HERBS AND SPICES:** Including: 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, Culantro (leaf), Culantro (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: 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 (367 ml to 1,331 ml/Ha) in 25 or more gallons (95 L or more) 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.

**ORNAMENTALS:** Including: African Violet, Ageratum, Aster, Azalea, Begonia, 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.



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**USE ON GREENHOUSE FRUIT, VEGETABLES, FLOWER AND FOLIAGE PLANTS:** Combine 16 to 32 fluid ounces with 100 gallons (1.25 ml to 2.50 ml/L) of water for applications with conventional sprayers or 7 to 15 ml (1/4 – 1/2 of a fluid ounce) per gallon (2 ml to 4 ml/L) 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 (1.25 ml to 2.50 ml/L) 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 (12.5 ml to 25.0 ml/L) of water for applications with low volume mist blowers or 7 to 15 ml (1/4 – 1/2 of a fluid ounce) per gallon (2 ml to 4 ml/L) water for applications with handheld or backpack sprayers.

~~**FOR USE ON AND AROUND LISTED OUTDOOR AREAS:** To kill 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 (2 ml to 4 ml/L) 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 kill listed insects dilute 7 to 15 ml of PyGanic Crop Protection EC 5.0<sub>II</sub> per gallon (2 ml to 4 ml/L) of water. Apply diluted solution with all types of agricultural sprayers, including 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 (1.25 ml to 2.50 ml/L) 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 (2 ml to 4 ml/L) of water for applications with handheld or backpack sprayers.

**USE WITH HYDROPONICALLY GROWN VEGETABLES AND ORNAMENTALS**

**AS A WATER SYSTEM TREATMENT:** To kill 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<br>Concentration | ml of<br>PyGanic® Crop<br>Protection EC 5.0 <sub>II</sub> | Gallons of<br>Water |
|-----------------------------|---|---------------------|
| 0.1 ppm                     | 80  | 10,000<br>(37,800L) |
| 0.01 ppm                    | 8.0   | 10,000<br>(37,800L) |
| 0.001 ppm                   | 0.80  | 10,000<br>(37,800L) |

**\*FOR USE ON HARVESTED FRUITS AND VEGETABLES:** 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 (0.5L) with 125 gallons (472.5L) of water or 5 ml with 10 pints (4.7L) 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 (2.3L to 2.8L) 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.

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

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.

**USE AS A SURFACE SPRAY IN LISTED INDOOR AREAS:** to kill accessible, exposed stages of listed crawling insects, dilute 1 – 3 fluid ounces of concentrate with one gallon (8 ml to 24 ml/L) of water, mix well and apply as a coarse wetting spray at the rate of 1 gallon of spray mixture per 750 square feet (54 ml/L) of surface. To ensure maximum kill 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 (excluding fire and Pharaoh ants), spray directly into nests, along trails, and directly on all ants observed.

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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 (0.40g/L)                            | 0.039%                         |
| 2  | 0.0064 (0.77g/L)                            | 0.078%                         |
| 3  | 0.0096 (1.15 g/L)                           | 0.118%                         |
| 4  | 0.0128 (1.53 g/L)                           | 0.159%                         |
| 5  | 0.0160 (1.92 g/L)                           | 0.200%                         |
| 6  | 0.0192 (2.30 g/L)                           | 0.242%                         |
| 7  | 0.0224 (2.69 g/L)                           | 0.284%                         |
| 8  | 0.0256 (3.07 g/L)                           | 0.328%                         |
| 12   | 0.038 (4.56 g/L)                            | 0.508%                         |
| 16   | 0.051 (6.12 g/L)                            | 0.702%                         |
| 22   | 0.070 (8.4 g/L)                             | 1.020%                         |

**FOR FEDERALLY INSPECTED MEAT AND POULTRY PROCESSING FACILITIES:** To kill accessible, exposed stages of listed crawling insects, dilute 9 fluid ounces with one gallon (71.4 ml/L) of water and apply at the rate of 1 gallon to 750 square feet (54 ml/m<sup>2</sup>), 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 (1.04 ml/m<sup>3</sup>) 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 (1.04 ml/m<sup>3</sup>) 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: |       |  |  |  |                                |
|-----------------|-------|--|--|--|--------------------------------|
| Concentrate     | Water | 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 |
| Undiluted       |       | 1.00 (1.04ml/g)  | 0.00   | 0.0032 (0.041 g/m <sup>3</sup> )   | 5.00%                          |
| 1               | 1     | 0.50 (0.52 ml/g)   | 0.50   | 0.0016 (0.020 g/m <sup>3</sup> )   | 2.47%                          |
| 1               | 2     | 0.33 (0.34 ml/g)   | 0.67   | 0.0011 (0.014 g/m <sup>3</sup> )   | 1.65%                          |
| 1               | 3     | 0.25 (0.26 ml/g)   | 0.75   | 0.00101 (0.013 g/m <sup>3</sup> )  | 1.23%                          |
| 1               | 4     | 0.20 (0.21 ml/g)   | 0.80   | 0.00064 (0.0082g/m <sup>3</sup> )  | 0.99%                          |
| 1               | 8     | 0.11 (0.11 ml/g)   | 0.89   | 0.00035 (0.0045 g/m <sup>3</sup> )   | 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 (71.37 ml/L)). 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 (40 ml/L). 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 the following stored product pests: 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.

**\*ON ALMONDS, PEANUTS, PISTACIOS AND WALNUTS IN BULK OR IN BAGS:** To kill the following stored product insects: 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>II</sub> per gallon (15.86 ml/L) 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 (160 ml/m<sup>2</sup>). 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 (160 ml/m<sup>2</sup>), and subsequent treatments should be applied at the rate of 2 gallons per 1000 square feet (80 ml/m<sup>2</sup>).

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

**TREATMENT OF STORED GRAIN AND SEED AREAS:** For best results to kill 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 (0.5 L) with one gallon (3.78L) of water). Apply at the rate of one gallon per 750 square feet (54 ml/m<sup>2</sup>) 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 (48 ml/L) of water). Thoroughly mix the emulsion and apply at the rate of 5 gallons (18.9L) 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 (0.6 -0.9 m) are infested, re-treat applying at the rate of 2 gallons (7.56 L) 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>II</sub> with 14 parts of water and apply at the rate of 2 gallons per 1000 square feet (80ml/m<sup>2</sup>) of grain. Rake the mixture into the grain to a depth of 4 inches (1.2 m).

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

**FOR USE ON LISTED ANIMALS:**

- 1) To kill and repel Horn Flies, House Flies and Gnats, dilute at the rate of 1.5 to 3 fluid ounces per gallon (12 ml to 24 ml/L) 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, dilute at the rate of 2.5 to 4 fluid ounces per gallon (20 ml to 32 ml/L) 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 (20 ml/L) 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 ( 28.35 g – 42.52 g) 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 (226.8L) of water (1.5 fluid ounces with 2 gallons (6 ml/L)) 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 (20 ml to 32 ml/L) 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 mites on poultry and in poultry houses, dilute at the rate of 2.5 to 4 fluid ounces per gallon (20 ml to 32 ml/L) of water and spray crevices of roost poles, cracks in walls and cracks in nests where the 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 (3 ml/L to 6 ml/L) 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 brown dog ticks on livestock and to obtain protection against reinfestation, dilute at the rate of 9 fluid ounces per gallon (71 ml/L) 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 brown dog 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.
- 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 (23 m<sup>2</sup> – 46 m<sup>2</sup>). 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 (0.6 m) up and 1-4 feet (0.3 – 1.2 m) out from the foundation.

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FOR USE IN BARNs, DAIRIES, MILKING PARLORS, MILKING ROOMS AND POULTRY HOUSES. To kill the following flying insects : Flies, 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 1000 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.

### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a warm, dry area. Always store pesticides in the original container. Store away from food and pet food.

**PESTICIDE DISPOSAL:**  
To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry.)

**CONTAINER HANDLING:**

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill.

Triple Rinse as follows [for containers of 5 Gallons (18.9 L) or less]: 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.

Pressure rinse as follows [for containers greater than 5 Gallons (18.9L) too large to shake]: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Net Contents \_\_\_\_\_

Manufactured by:  
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