

## **PLEASE NOTE**

**This image contains more than one label approved for this product on this date.**



GROUP 7D INSECTICIDE

# KNACK®

## INSECT GROWTH REGULATOR

|                         |         |
|-------------------------|---------|
| Active Ingredient       | By Wt.  |
| *Pyriproxyfen .....     | 11.23%  |
| Other Ingredients ..... | 88.77%  |
| Total .....             | 100.00% |

\*(2-[1-methyl-2-(4-phenoxyphenoxy)ethoxy]pyridine)

Contains 0.86 pound ai per gallon.

Contains aromatic petroleum distillates.

**ACCEPTED**

OCT 25 2005

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 59639-95

**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

SEE NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS 1 GALLON

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS & DOMESTIC ANIMALS**  
**CAUTION**

Causes skin and eye irritation. Do not get on skin, in eyes or on clothing. Harmful if inhaled, swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

**FIRST AID**

- |                                |  |
|--------------------------------|--|
| <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 further treatment advice.</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 swallowed:</b>           | <ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul> |
| <b>If inhaled:</b>             | <ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>              |

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-892-0099** for emergency medical treatment information.

**NOTE TO PHYSICIANS**

If ingested, probable mucosal damage may contraindicate the use of gastric lavage. This product contains a light hydrocarbon liquid; ingestion or subsequent vomiting can result in aspiration of this product, which can cause pneumonitis.

**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 G on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:** coveralls over short-sleeved shirt and short pants or long-sleeved shirt and long pants, chemical-resistant gloves, such as Barrier Laminate or Viton  $\geq$  14 mils, 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.

### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing 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 toxic to fish and aquatic invertebrates. 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 and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by disposing of equipment washwaters or rinsate. Avoid direct application and/or spray drift to bee hives.

### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

**READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (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 the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls over short-sleeved shirt and short pants, chemical-resistant gloves, such as Barrier Lamine or Viton  $\geq$  14 mils, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure.

**DISCLAIMER, RISKS OF USING THIS PRODUCT,  
LIMITED WARRANTY  
AND LIMITATION OF LIABILITY**

**IMPORTANT:** Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.

**RISKS OF USING THIS PRODUCT**

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

**LIMITED WARRANTY**

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label and subject to the Risks of Using This Product as described above. EXCEPT AS SET FORTH ABOVE, VALENT MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED. No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

**LIMITATION OF LIABILITY**

In no event shall Valent or Seller be liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

**PROMPT NOTICE OF CLAIM**

Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

If Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

**NO AMENDMENTS**

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability, which may not be modified by any oral or written agreement.

**TANK MIXES**

**NOTICE:** Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor.

Read and follow the entire label of each product to be used in the tank mix with this product.

**RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management purposes, KNACK is a Group 7D insecticide. Any insect population may contain individuals naturally resistant to KNACK and other Group 7D insecticides. The resistant individuals dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by KNACK or other Group 7D insecticides, although local experts should be consulted for local resistance recommendations. The classification scheme is based on mode of action. It is recognized that resistance of insects and mites to insecticides and acaricides can also result from enhanced metabolism, reduced penetration or behavioral changes that are not linked to any site of action classification but are specific for individual chemicals or chemical groupings. Despite this, alternation of compounds from different chemical classes remains a viable management technique.

To delay insecticide resistance

- Avoid exclusive repeated use of insecticides from the same chemical subgroup.
- Integrate other control methods (chemical, cultural, biological) into insect control programs.

For further information contact your local distributor.

## GENERAL INFORMATION

- Do not apply this product through any type of irrigation system.

**KNACK is intended for use in Insect Pest Management (IPM) or Insect Resistance Management (IRM) programs. KNACK will not control insect adults, and it is recommended to be used in combination and/or rotation with other IPM or IRM materials. Contact your local state extension service for details.**

KNACK acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

## COTTON

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

KNACK does exhibit translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROP   | PESTS  | PRODUCT RATE PER ACRE                                     | SPECIAL INSTRUCTIONS   |
|--|--|---|--|
| Cotton   | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly | 8 to 10 fl. oz.<br><br>Do not apply less than 8 fl. oz./A | Apply with air or ground equipment in adequate water for uniform coverage:<br><br>By Air:..... 3 to 10 gals./A<br>By Ground: ..... 10 to 50 gals./A<br><br><b>HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.</b><br><br>Make only one application per growing season.<br><br>Begin application when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).<br><br>Under severe pressure, use the higher recommended rates.<br><br>Only whole fields should be treated. |
| <ul style="list-style-type: none"> <li>• Do not apply within 28 days of harvest.</li> <li>• Do not make more than 1 KNACK application per growing season.</li> <li>• Do not exceed 10 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.067 lb. pyriproxyfen per acre per season.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after last application</li> </ul> |  |   |  |

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to one application per growing season. KNACK Insect Growth Regulator may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl. oz. per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.



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## POME FRUIT

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROP   | PESTS  | PRODUCT RATES PER ACRE | SPECIAL INSTRUCTIONS  |
|--|--|------------------------|---|
| <b>Pome Fruit:</b><br><br>Apple<br>Crabapple<br>Loquat<br>Mayhaw<br>Quince | Codling Moth<br><br>Suppression of:<br>Pandemis Leafroller<br>Obliquebanded Leafroller | 13 to 16 fl. oz.       | <p>Apply by ground with airblast equipment in a minimum of 50 gals./A. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage</p> <p><b>1st Generation Codling Moth:</b> Apply at Biofix plus 100 degree days (this is usually close to petal fall). Make a second application 14 to 21 days later or timed to coincide with peak moth flights. For subsequent applications, if needed, apply other insecticides registered for Codling Moth control. The addition of oil has been shown to increase Codling Moth activity of KNACK. Follow local recommendations regarding in season use and rates of oil in your area.</p> <p><b>Obliquebanded and Pandemis Leafroller:</b> Apply to the overwintering larvae at the pink to petal fall tree growth stage. KNACK does not directly control the larvae but inhibits normal pupation and adult emergence</p> |
|  | Florida Red Scale<br>Lecanium Scale<br>San Jose Scale                                  | 13 to 16 fl. oz.       | <p>Apply by ground with airblast equipment in a minimum of 50 gals./A. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply at delayed dormant through pink. For delayed dormant use a superior spray oil at the manufacturer's recommended rate of oil. Under heavy scale pressure, use the higher rate of KNACK.</p> <p><b>Scale:</b> For control in-season, make application in cover sprays when scale crawlers first emerge. The use of oil at the crawler emergence stage has been shown to improve control. Follow local recommendations regarding in-season use and rates of oil in your area.</p>   |

continued

| CROP   | PESTS  | PRODUCT RATES PER ACRE  | SPECIAL INSTRUCTIONS   |
|--|--|-------------------------|--|
| <p>Pome Fruit (continued):</p> <p>Apple<br/>Crabapple<br/>Loquat<br/>Mayhaw<br/>Quince</p> | <p>Green Apple Aphid<br/>Rosy Apple Aphid<br/>Spirea Aphid<br/>Spotted Tentiform Leafminer<br/>Western Tentiform Leafminer</p> | <p>10 to 16 fl. oz.</p> | <p>Apply by ground with airblast equipment in a minimum of 50 gals./A. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage</p> <p><b>Leafminers:</b> Apply at peak moth flight for control of 1<sup>st</sup> or 2<sup>nd</sup> generation. This usually occurs at pre-pink to pink apple stage for 1<sup>st</sup> generation and 2<sup>nd</sup> cover for 2<sup>nd</sup> generation.</p> <p><b>Rosy Apple Aphid:</b> Apply at 1/2" green apple growth stage.</p> <p><b>Green Apple &amp; Spirea Aphid:</b> Apply when aphids first appear, but before aphids are colonized.</p> <p><b>TIMING IS CRITICAL FOR ACCEPTABLE APHID CONTROL.</b></p> |
| <p>Pear<br/>Oriental<br/>Pear</p>  | <p>Pear Psylla</p>   | <p>13 to 16 fl. oz.</p> | <p>Apply by ground with airblast equipment in 75 to 400 gals./A with a superior spray oil at manufacturer's recommended rates for the stage of growth. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply a single application during the delayed dormant to pink stage of growth at 16 fl. oz./A or make two applications from delayed dormant through petal fall stage of growth at 13 to 16 fl. oz./A. Make application just before sustained egg lay is anticipated.</p> <p><b>DO NOT USE SKIP ROWS DURING APPLICATION.</b></p> <p>For in-season control of pear psylla, use an insecticide recommended for this use.</p>  |
|  | <p>Lecanium Scale<br/>San Jose Scale</p>   | <p>13 to 16 fl. oz.</p> | <p>Apply by ground with airblast equipment in 100 to 400 gals./A at delayed dormant with a superior spray oil at the manufacturer's recommended rates. Under heavy scale pressure, use the higher rate.</p> <p>Apply in sufficient water volume for tree size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>For control of scale in-season make application in cover sprays when scale crawlers first emerge. The use of oil at the crawler emergence stage has been shown to improve performance. Follow local recommendations regarding in-season use and rates of oil in your area.</p>                                      |

continued

| CROP  | PESTS   | PRODUCT RATES PER ACRE  | SPECIAL INSTRUCTIONS   |
|---|---|-------------------------|--|
| <p>Pome Fruit (continued):</p> <p>Pear</p> <p>Oriental Pear</p>   | <p>Codling Moth</p> <p>Suppression of:</p> <p>Obliquebanded Leafroller</p> <p>Pandemis Leafroller</p> | <p>13 to 16 fl. oz.</p> | <p>Apply by ground with airblast equipment in 100 to 400 gals./A.</p> <p><b>1st Generation Codling Moth:</b> Apply at Biofix plus 100 degree days. Make a second application 14 to 21 days later or timed to coincide with peak moth flights. For subsequent applications, if needed, apply other insecticides registered for Codling Moth control. The addition of oil has been shown to increase Codling Moth activity of KNACK. Follow local recommendations regarding in-season use and rates of oil in your area.</p> <p>For additional generations apply other insecticides registered for Codling Moth Control.</p> |
| <p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.</p> <ul style="list-style-type: none"> <li>• Do not apply within 45 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.218 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |   |                         |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

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## CITRUS (Including Ugli Fruit and White Sapote)

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROP  | PESTS  | PRODUCT RATES<br>PER ACRE | SPECIAL INSTRUCTIONS  |
|---|--|---------------------------|---|
| Citrus<br>Ugli Fruit<br>White Sapote  | Black Scale<br>Brown Soft Scale<br>California Red Scale<br>Florida Red Scale<br>Snow Scale | 16 fl. oz.                | <p>Apply with ground equipment in 200 to 1500 gals./A. Apply in sufficient water volume for tree size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply anytime prior to fruit becoming infested when scale is in the crawler stage. Application at the 2<sup>nd</sup> or 3<sup>rd</sup> generation of scale may result in excessive dead scale remaining on the fruit at harvest. Thorough coverage is essential for good control.</p> <p>KNACK may be applied with superior spray oils at 1/2 to 1%. Follow the manufacturer's directions and recommendations on timing and rates.</p> <p>NOTE: For scale apply only one application during emergence of scale crawlers per calendar year.</p> |
|   | Citrus Black Fly<br>Citrus Leafminer<br>Citrus Whitefly                                    | 10 fl. oz.                | <p>Apply with ground application in 200 to 1,500 gals./A. Apply in sufficient water volume for tree size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply when pests are just beginning to build and before infestation has occurred. Thorough coverage is essential for good control.</p>  |
| <p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.</p> <ul style="list-style-type: none"> <li>• Do not apply within 1 day of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 26 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.134 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 21 days after last KNACK treatment.</li> </ul> |  |                           |   |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state, and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

### TREE NUTS

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROP                 | PESTS  | PRODUCT RATES PER ACRE | SPECIAL INSTRUCTIONS   |
|----------------------|--|------------------------|--|
| Tree Nuts:<br>Almond | Black Scale<br>San Jose Scale<br><br>Suppression of:<br>Peach Twig Borer   | 13 to 16 fl. oz.       | Apply with ground equipment in 100 to 400 gals./A. Coverage is essential for good control. Apply in sufficient water volume for tree size. Use of higher water volume will assure better coverage.<br><br>Apply at either dormant, delayed dormant or an in-season cover spray. At dormant, delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.<br><br>KNACK has provided good suppression of Peach Twig Borer when applied delayed dormant through bloom sprays. |
|                      | Almond:<br><ul style="list-style-type: none"> <li>• Do not apply within 21 days of harvest.</li> <li>• Do not make more than 1 KNACK application per growing season.</li> <li>• Do not exceed 16 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.109 lb. pyriproxyfen per acre per season.</li> </ul> |                        |  |

continued

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| CROPS   | PESTS  | PRODUCT RATES PER ACRE  | SPECIAL INSTRUCTIONS   |
|---|--|-------------------------|--|
| <p><b>Tree Nuts</b><br/>(continued):</p> <p>Beechnut<br/>Brazil<br/>Butternut<br/>Cashew<br/>Chestnut<br/>Chinquapin<br/>Filbert (Hazelnut)<br/>Hickory<br/>Macadamia<br/>Pecan<br/>Pistachio<br/>Walnut</p>  | <p>Codling Moth<br/>Dusky Veined Aphid<br/>Walnut Aphid</p>  | <p>16 fl. oz.</p>       | <p>Apply with ground equipment in 100 to 400 gals./A. Apply in sufficient water volume for tree size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p><b>1st Generation Codling Moth:</b> Apply at Biofix plus 100 degree days. Make a second application 14 to 21 days later or timed to coincide with peak moth flights. For subsequent applications, if needed, apply other insecticides registered for Codling Moth control. The addition of oil has been shown to increase Codling Moth activity of KNACK. Follow local recommendations regarding in-season use and rates of oil in your area.</p>  |
|   | <p>Black Scale<br/>Brown Soft Scale<br/>Italian Scale<br/>Lecanium Scale<br/>San Jose Scale<br/>Walnut Scale</p> <p>Suppression of:<br/>Peach Twig Borer</p> | <p>13 to 16 fl. oz.</p> | <p>Apply with ground equipment in 100 to 400 gals./A at either dormant, delayed dormant or an in-season cover spray. The addition of a superior spray oil at dormant or delayed dormant may improve scale control. However, do not use a spray oil in oil sensitive crops such as Walnut. Follow manufacturer's recommendations regarding use and rates of oil for your area.</p> <p>In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.</p> <p>Under heavy scale pressure, use the higher rate.</p> <p>Coverage is essential for good control. Apply in sufficient water volume for tree size. Use of higher water volume will assure better coverage.</p> |
| <p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.</p> <ul style="list-style-type: none"> <li>• Do not apply within 21 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.218 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |  |                         |  |

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## FRUITING VEGETABLES

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

KNACK does exhibit translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROPS   | PESTS   | PRODUCT RATES PER ACRE  | SPECIAL INSTRUCTIONS  |
|---|---|---|---|
| <b>Fruiting Vegetables:</b><br><br>Eggplant<br>Ground Cherry<br>Okra<br>Pepino<br>Pepper<br>Tomatillo<br>Tomato | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly  | 8 to 10 fl. oz.<br><br>Do not apply less than 8 fl. oz./A. of KNACK when used as a stand alone application.         | Apply with air or ground equipment in adequate water for uniform coverage:<br>By Air:.....3 to 10 gals./A.<br>By Ground:.....10 to 50 gals/A.<br><br><b>HIGHER WATER VOLUMES PROVIDE IMPROVED INSECT CONTROL.</b><br><br>Begin application when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures). Under severe pressure, use the higher recommended rates.<br><br>Only whole fields should be treated.        |
|   | Banded Wing Whitefly<br>Cabbage Looper<br>Green Peach Aphid<br>Greenhouse Whitefly (immatures & adults)<br>Silverleaf Whitefly<br>Sweetpotato Whitefly<br>Tobacco Hornworm  | 6 to 8 fl. oz.<br><br>+<br><br>ORTHENE® 75 S<br>0.6G to 1.33 lbs./A<br><br>or<br><br>ORTHENE 97<br>0.5 to 1.0 lb./A | Apply as a tank mix with ground equipment for uniform coverage (25 to 150 gals./A. by ground). Make application when eggs or insects first appear. If control is needed during this period use an alternate insecticide registered for the target pest.<br><br>KNACK may also be mixed or alternated with commonly used insecticides to comply with local IPM programs.<br><br>Comply with all applicable directions, restrictions and precautions on the registered labels for ORTHENE 75 S or ORTHENE 97. |
|   | <ul style="list-style-type: none"> <li>• Do not apply within 14 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.109 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> </ul> |   |   |

continued

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| CROP  | PESTS  | PRODUCT RATES PER ACRE   | SPECIAL INSTRUCTIONS   |
|---|--|--|--|
| <b>Fruiting Vegetables</b><br>(continued):<br><br>Tomato  | Banded Wing Whitefly<br>Beet Armyworm<br>Fruitworm<br>Greenhouse Whitefly<br>(immatures & adults)<br>Potato Aphid<br>Silverleaf Whitefly<br>Sweetpotato Whitefly<br>Thrips<br>Tomato Pinworm<br>Yellowstriped Armyworm | 6 to 8 fl. oz.<br><br>+<br><br>MONITOR @ 4 Spray<br>24 fl. oz.<br><br>+<br><br>DANITOL @ 2.4 EC Spray<br>10½ fl. oz. | <p><b>EARLY SEASON WHITEFLY CONTROL PROGRAM FOR REDUCTION OF GEMINIVIRUS:</b><br/>           Apply as a tank mix with ground equipment for uniform coverage (10 to 120 gals./A). Make application when scouting first indicates adult whiteflies are on young plants. <b>NOTE:</b> This may result in treatment immediately following transplanting.</p> <p><b>MID TO LATE SEASON WHITEFLY CONTROL PROGRAM FOR PREVENTION OF IRREGULAR FRUIT RIPENING:</b> Apply as a tank mix with ground equipment for uniform coverage (20 to 120 gals./A. by ground). Make application when scouting indicates whiteflies are present.</p> <p>KNACK may also be mixed or alternated with commonly used insecticides to comply with local IPM programs.</p> <p>Comply with all applicable directions, restrictions and precautions on the registered labels for MONITOR 4 Spray and DANITOL 2.4 EC Spray.</p> |
| <ul style="list-style-type: none"> <li>• Do not apply within 14 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 16 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.134 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> </ul> |  |  |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.



## STONE FRUIT

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROPS   | PESTS  | PRODUCT RATES PER ACRE | SPECIAL INSTRUCTIONS   |
|---|--|------------------------|--|
| <b>Stone Fruit:</b><br><br>Apricot<br>Cherry<br>Chickasaw Plum<br>Damson Plum<br>Fresh Prune<br>Japanese Plum<br>Nectarine<br>Peach<br>Plum<br>Plumcot<br>Prune   | Lecanium Scale<br>San Jose Scale<br><br><br>Suppression of:<br>Peach Twig Borer<br>Oriental Fruit Moth | 13 to 16 fl. oz.       | Apply in 100 to 400 gals./A. with ground equipment. Coverage is essential for good control. Apply in sufficient water volume for tree size. Use of higher water volume will assure better coverage.<br><br><b>Scale:</b> Apply at dormant, delayed dormant or as an in-season cover spray: At dormant, delayed dormant, use a spray oil at the manufacturer's recommended oil rate.<br><br>Under heavy scale pressure, use the higher rate of KNACK.<br><br><b>Peach Twig Borer:</b> KNACK has provided good suppression of Peach Twig Borer when applied delayed dormant through bloom sprays. Use a spray oil at the manufacturer's recommended rate for the stage of crop growth. |
| In-season sprays of KNACK may not protect fruit from blemishes by scale.<br><br>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.  |  |                        |  |
| <ul style="list-style-type: none"> <li>• Do not apply within 14 days of harvest.</li> <li>• Do not make more than 3 KNACK applications per growing season.</li> <li>• Do not exceed 48 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.327 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |  |                        |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to three applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## BRASSICA LEAFY VEGETABLES

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

KNACK does exhibit translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROPS  | PESTS  | PRODUCT RATES<br>PER ACRE | SPECIAL INSTRUCTIONS  |
|--|--|---------------------------|---|
| <b>Brassica Leafy Vegetables:</b><br>Broccoli<br>Broccoli Raab (rapini)<br>Brussels Sprouts<br>Cabbage<br>Cauliflower<br>Cavalo Broccolo<br>Chinese Broccoli (gailon)<br>Chinese Cabbage<br>(bok choy and napa)<br>Chinese Mustard (gai choy)<br>Collards<br>Kale<br>Kohlrabi<br>Mizuna<br>Mustard Greens<br>Mustard Spinach<br>Rape Greens  | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly | 8 to 10 fl. oz.           | Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals./A).<br><br><b>HIGHER WATER VOLUMES<br/>MAY PROVIDE IMPROVED<br/>INSECT CONTROL.</b><br><br>Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).<br><br>Under severe pressure, use the higher recommended rates.<br><br>Only whole fields should be treated. |
| <ul style="list-style-type: none"> <li>• Do not apply within 7 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.134 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> </ul> |  |                           |   |

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl. oz./A for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal IPM and Integrated Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## OLIVE

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROP   | PESTS                         | PRODUCT RATES PER ACRE | SPECIAL INSTRUCTIONS   |
|--|-------------------------------|------------------------|--|
| Olive  | Black Scale<br>San Jose Scale | 13 to 16 fl. oz.       | <p>Apply with ground equipment in 100 to 400 gals./A. Apply in sufficient water volume for tree size. Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply at either dormant, delayed dormant or an in-season cover spray. At dormant, delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.</p> <p>Under heavy scale pressure, use the higher rate of KNACK.</p> |
| <p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.</p> <ul style="list-style-type: none"> <li>• Do not apply within 7 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.218 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |                               |                        |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## CUCURBITS

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

KNACK does exhibit translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROPS  | PESTS  | PRODUCT RATES PER ACRE                                    | SPECIAL INSTRUCTIONS   |
|--|--|---|--|
| <b>Cucurbits:</b><br>Balsam Apple<br>Balsam Pear<br>Bitter Melon<br>Cantaloupe<br>Chayote<br>Chinese Cucumber<br>Chinese Waxgourd<br>Citron Melon<br>Cucumber<br>Edible Gourd<br>Gherkin<br><i>Momordica</i> spp.<br>Muskmelon<br>Pumpkin<br>Summer Squash<br>Watermelon<br>Winter Squash  | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly | 8 to 10 fl. oz.<br><br>Do not apply less than 8 fl. oz./A | Apply with air or ground equipment in adequate water for uniform coverage:<br>By air.....3 to 10 gals./A<br>By Ground...10 to 50 gals./A<br><br><b>HIGHER WATER VOLUMES PROVIDE IMPROVED INSECT CONTROL.</b><br><br>Begin application when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).<br><br>Under severe pressure, use the higher recommended rates.<br><br>Only whole fields should be treated. |
| <ul style="list-style-type: none"> <li>• Do not apply within 7 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.134 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> </ul> |  |   |  |

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides or insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl. oz. per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal IPM and Integrated Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

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## TROPICAL & SUBTROPICAL FRUIT

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROPS   | PEST  | PRODUCT RATE PER ACRE | SPECIAL INSTRUCTIONS  |
|---|-------|-----------------------|---|
| <b>Tropical &amp; Subtropical Fruit:</b><br>Acerola<br>Atemoya<br>Avocado<br>Biriba<br>Black Sapote<br>Canistel<br>Cherimoya<br>Custard Apple<br>Feijoa<br>Guava<br>Ilama<br>Jaboticaba<br>Longan<br>Lychee<br>Mamey Sapote<br>Mango<br>Passionfruit<br>Papaya<br>Pulasan<br>Rambutan<br>Sapodilla<br>Sour sop<br>Spanish Lime<br>Star Apple<br>Starfruit<br>Sugar Apple<br>Wax Jambu   | Scale | 16 fl. oz.            | <p>Apply with ground or air equipment as a full coverage spray (minimum of 5 gals./A by air or 50 gals./A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply at either dormant, delayed dormant or an in-season cover spray. At dormant or delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.</p> |
| <p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and resistance management programs.</p> <ul style="list-style-type: none"> <li>• Do not apply within 14 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.218 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |       |                       |   |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## BUSHBERRIES

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROPS  | PESTS   | PRODUCT RATE PER ACRE | SPECIAL INSTRUCTIONS   |
|--|---|-----------------------|--|
| <b>Bushberries:</b><br><br>Blueberry<br>Currant<br>Elderberry<br>Gooseberry<br>Huckleberry<br>Juneberry<br>Lingonberry<br>Salal  | Cherry Fruitworm<br>Cranberry Fruitworm<br>Lecanium Scale | 16 fl. oz             | Apply with ground or air equipment as a full coverage spray (minimum of 5 gals./A by air or 50 gals./A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.<br><br><b>Fruitworms:</b> Apply when egg laying begins and again at petal fall. Additional applications of another insecticide, at 10 – 14 day intervals, may be needed under high population pressure or sustained moth flight.<br><br><b>Lecanium Scale:</b> Apply at either dormant, delayed dormant or an in-season cover spray. At dormant or delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area. |
| KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.   |   |                       |  |
| <ul style="list-style-type: none"> <li>• Do not apply within 7 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.218 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |   |                       |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## STRAWBERRY

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

KNACK exhibits translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROP       | PESTS   | PRODUCT RATE PER ACRE | SPECIAL INSTRUCTIONS  |
|------------|---|-----------------------|---|
| Strawberry | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly  | 10 fl. oz.            | Apply with ground equipment as a full coverage spray (100 to 400 gals./A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.<br><br>Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).<br><br>Under severe pressure, use the higher recommended rates.<br><br>Only whole fields should be treated. |
|            | <ul style="list-style-type: none"> <li>• Do not apply within 2 days of harvest.</li> <li>• Do not make more than two (2) KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Do not apply earlier than 30 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> <li>• Regardless of formulation, do not apply more than 0.134 lb. of pyriproxyfen per acre per season.</li> </ul> |                       |   |

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Integrated Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## GRAPE

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

| CROP  | PESTS  | PRODUCT RATE PER ACRE | SPECIAL INSTRUCTIONS   |
|---|--|-----------------------|--|
| Grape   | Glassy-Winged Sharpshooter<br>Grape Berry Moth<br>Lecanium Scale | 16 fl. oz.            | <p>Apply with ground equipment as a full coverage spray (50 to 200 gals./A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p><b>Lecanium Scale:</b> Apply at either dormant, delayed dormant or an in-season cover spray. At dormant, delayed dormant you may use a spray oil at the manufacturer's recommended oil rate. Do not use oil in an in-season spray. In a cover spray make applications when scale crawlers first emerge.</p> <p>Follow local recommendations regarding in-season use and rates of oil in your area.</p> |
| <ul style="list-style-type: none"> <li>• Do not apply within 21 days of harvest.</li> <li>• Do not make more than two (2) KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. KNACK per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Regardless of formulation, do not apply more than 0.22 lb. active of pyriproxyfen per acre per season.</li> </ul> |  |                       |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.



## LEGUME VEGETABLES (Except Soybean)

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

KNACK exhibits translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROP                                  | PESTS   | PRODUCT RATES<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|---------------------------------------|---|---------------------------|--|
| Legume Vegetables<br>(except Soybean) | Silverleaf Whitefly<br>Sweetpotato Whitefly   | 8 to 10 fl. oz.           | <p><b>EARLY SEASON WHITEFLY PROGRAM:</b><br/>Apply with ground equipment in adequate water for uniform coverage. (10 to 50 gals./A. Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).</p> <p>Under severe pressure, use the higher recommended rates.</p> <p>Only whole fields should be treated.</p> |
|                                       | <ul style="list-style-type: none"> <li>• Do not use on legume vegetable varieties grown for livestock feed.</li> <li>• Do not apply within 7 days of harvest.</li> <li>• Do not make more than two (2) KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> <li>• Regardless of formulation, do not apply more than 0.134 lb. of pyriproxyfen per acre per season.</li> </ul> |                           |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

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## ONION (DRY BULB ONLY)

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

| CROP   | PESTS                                 | PRODUCT RATES<br>PER ACRE | SPECIAL INSTRUCTIONS  |
|--|---------------------------------------|---------------------------|---|
| Onion (Dry Bulb Only)  | Onion Thrips<br>Western Flower Thrips | 8 fl. oz.                 | <b>FOR SUPPRESSION OF ONION THRIPS:</b> Apply with ground equipment in adequate water for uniform coverage. (20 to 50 gals./A) Begin applications when thrips reach threshold levels per University/Extension. Thorough coverage is critical for adequate water volume to ensure thorough coverage. |
| <ul style="list-style-type: none"> <li>• Do not apply within 3 days of harvest.</li> <li>• Do not make more than two (2) KNACK applications per growing season.</li> <li>• Do not exceed 16 fl. oz. KNACK per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> <li>• Regardless of formulation, do not apply more than 0.11 lb. of pyriproxyfen per acre per season.</li> </ul> |                                       |                           |   |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

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## PASTURE GRASS AND RANGELAND

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

| CROPS                       | PESTS                            | PRODUCT RATES<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|-----------------------------|----------------------------------|---------------------------|--|
| Pasture Grass and Rangeland | Cricket<br>Grasshopper<br>Locust | 8 to 10 fl. oz.           | Apply with air or ground equipment in adequate water for uniform coverage:<br>By air.....3 to 10 gals./A<br>By Ground...10 to 50 gals./A<br><br><b>HIGHER WATER VOLUMES<br/>PROVIDE IMPROVED INSECT<br/>CONTROL.</b><br><br>Begin application when pests reach threshold levels per University/Extension recommendations.<br><br>Under severe pressure, use the higher recommended rates.  |
|                             |                                  |                           | <ul style="list-style-type: none"> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.134 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> </ul> |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

2/12/07

## STORAGE AND DISPOSAL

### PROHIBITIONS

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

### PESTICIDE STORAGE

Store in a cool dry place.

Keep pesticide in original container.

Keep container closed when not in use.

Do not put concentrate or dilute into food or drink containers.

Not for use or storage in or around the home.

For help with any spill, leak, fire or exposure involving this material, call day or night 1-800-892-0099.

### 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). Do not reuse container. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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DANITOL® - Reg. TM of Sumitomo Chemical Company, Ltd.

KNACK® - Reg. TM of Valent U.S.A. Corporation

MONITOR® - Reg. TM of Valent U.S.A. Corporation

ORTHENE® - Reg. TM of OMS Investments, Inc.

Manufactured for:

**Valent U.S.A. Corporation**

P.O. Box 8025

Walnut Creek, CA 94596-8025

[www.valent.com](http://www.valent.com)

Made in U.S.A.

EPA Reg. No. 59639-95

EPA Est.

059639-00095.20050929.KNK.doc.

**NEXT**

**LABEL**

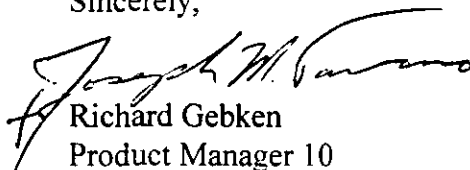
Thomas Schreier  
Valent USA Corporation  
1600 Riviera Ave., Suite 200  
Walnut Creek, CA 94596-8025

Subject: New Uses For:  
Knack Insect Growth Regulator  
EPA Registration No. 59639-95  
Application dated July 28, 2005

Dear Mr. Schreier:

The proposed amendment to the registration of the product cited above under The Federal Insecticide, Fungicide, And Rodenticide Act, as amended adding Grape, Legume Vegetables(Except Soybean), Onion(Dry Bulb only), Strawberry, Ugli Fruit and White Sapote to the terrestrial food use pattern is acceptable. A stamped copy of the accepted label is enclosed for your records.

Sincerely,



Richard Gebken  
Product Manager 10  
Insecticide Branch  
Registration Division (7505C)



# Supplemental Label



Valent U.S.A. Corporation  
P. O. Box 8025  
Walnut Creek, CA 94598-8025

## KNACK® (Insect Growth Regulator) EPA Reg. No. 59639-95

**ACCEPTED  
with COMMENTS**  
In EPA Letter Dated:  
OCT 25 2005

### KNACK USE ON: GRAPE

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
59639-95

#### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

**READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

#### GENERAL

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

| CROP   | PESTS  | RATE PER ACRE | SPECIAL INSTRUCTIONS  |
|--|--|---------------|---|
| Grape  | Glassy-Winged Sharpshooter<br>Grape Berry Moth<br>Lecanium Scale | 16 fl. oz.    | Apply with ground equipment as a full coverage spray (50 to 200 gals./A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.<br><br><b>Lecanium Scale:</b> Apply at either dormant, delayed dormant or an in-season cover spray. At dormant, delayed dormant you may use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge.<br><br>Follow local recommendations regarding in-season use and rates of oil in your area. |
| <ul style="list-style-type: none"> <li>• Do not apply within 21 days of harvest.</li> <li>• Do not make more than two (2) KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. KNACK per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Regardless of formulation, do not apply more than 0.336 lb. active of pyriproxyfen per acre per season.</li> </ul> |  |               |   |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

**THIS LABELING MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF APPLICATION. PLEASE REFER TO CONTAINER LABEL AND PAMPHLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS. FOLLOW ALL APPLICATION DIRECTIONS, RESTRICTIONS, AND PRECAUTIONS ON THE EPA REGISTERED LABEL.**

**PLEASE CONTACT VALENT U.S.A. CORPORATION AT 1-800-6-VALENT (682-5368) TO DETERMINE IF THIS USE IS REGISTERED IN YOUR STATE.**

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KNACK® - Reg. TM of Valent U.S.A. Corporation

Manufactured for  
Valent U.S.A. Corporation  
P. O. Box 8025  
Walnut Creek, CA 94596-8025  
[www.valent.com](http://www.valent.com)  
Made in U.S.A.

Form: 2004-KNK-0011



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# Supplemental Label



Valent U.S.A. Corporation  
P. O. Box 8025  
Walnut Creek, CA 94596-8025

## KNACK® (Insect Growth Regulator) EPA Reg. No. 59639-95

**ACCEPTED**  
with **COMMENTS**  
In EPA Letter Dated:  
**OCT 25 2005**

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
59639-95

### KNACK USE ON: STRAWBERRY

#### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

**READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

#### GENERAL

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

KNACK exhibits translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROP  | PESTS  | RATE PER ACRE | SPECIAL INSTRUCTIONS  |
|---|--|---------------|---|
| Strawberry  | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly | 10 fl. oz.    | Apply with ground equipment as a full coverage spray (100 to 400 gals./A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.<br><br>Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).<br><br>Under severe pressure, use the higher recommended rates.<br><br>Only whole fields should be treated. |
| <ul style="list-style-type: none"> <li>Do not apply within 2 days of harvest.</li> <li>Do not make more than two (2) KNACK applications per growing season.</li> <li>Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>Do not apply earlier than 30 days after last KNACK treatment.</li> <li>Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> <li>Regardless of formulation, do not apply more than 0.134 lb. of pyriproxyfen per acre per season.</li> </ul>   |  |               |   |
| <p><b>MANAGING WHITEFLY RESISTANCE:</b> Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Integrated Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.</p> |  |               |   |

**THIS LABELING MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF APPLICATION. PLEASE REFER TO CONTAINER LABEL AND PAMPHLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS. FOLLOW ALL APPLICATION DIRECTIONS, RESTRICTIONS, AND PRECAUTIONS ON THE EPA REGISTERED LABEL.**

**PLEASE CONTACT VALENT U.S.A. CORPORATION AT 1-800-6-VALENT (682-5368) TO DETERMINE IF THIS USE IS REGISTERED IN YOUR STATE.**

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KNACK® - Reg. TM of Valent U.S.A. Corporation

Manufactured for  
Valent U.S.A. Corporation  
P. O. Box 8025  
Walnut Creek, CA 94596-8025  
[www.valent.com](http://www.valent.com)

Made in U.S.A.

Form: 2004-KNK-0010

**NEXT**

**LABEL**



GROUP 7D INSECTICIDE

# KNACK®

## INSECT GROWTH REGULATOR

|                         |         |
|-------------------------|---------|
| Active Ingredient       | By Wt.  |
| *Pyriproxyfen .....     | 11.23%  |
| Other Ingredients ..... | 88.77%  |
| Total .....             | 100.00% |

\*(2-[1-methyl-2-(4-phenoxyphenoxy)ethoxy]pyridine)

Contains 0.86 pound ai per gallon.

Contains aromatic petroleum distillates.

**ACCEPTED**  
 OCT 25 2005  
 Under the Federal Insecticide,  
 Fungicide, and Rodenticide Act,  
 as amended, for the pesticide  
 registered under  
 EPA Reg. No. 59639-95

**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

**SEE NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS**

**NET CONTENTS 1 GALLON**

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# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Causes skin and eye irritation. Do not get on skin, in eyes or on clothing. Harmful if inhaled, swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

### FIRST AID

- If on skin or clothing:**
  - Take off contaminated clothing.
  - Rinse skin immediately with plenty of water for 15-20 minutes.
  - Call a poison control center or doctor for further treatment advice.
- If in eyes:**
  - Hold eye open and rinse slowly and gently with water for 15-20 minutes.
  - Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
  - Call a poison control center or doctor for treatment advice.
- If swallowed:**
  - Immediately call a poison control center or doctor.
  - Do not induce vomiting unless told to do so by a poison control center or doctor.
  - Do not give **any** liquid to the person.
  - Do not give anything by mouth to an unconscious person.
- If inhaled:**
  - Move person to fresh air.
  - If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
  - Call a poison control center or doctor for further treatment advice.

### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-892-0099** for emergency medical treatment information.

### NOTE TO PHYSICIANS

If ingested, probable mucosal damage may contraindicate the use of gastric lavage. This product contains a light hydrocarbon liquid; ingestion or subsequent vomiting can result in aspiration of this product, which can cause pneumonitis.

### 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 G on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:** coveralls over short-sleeved shirt and short pants or long-sleeved shirt and long pants, chemical-resistant gloves, such as Barrier Laminate or Viton  $\geq$  14 mils, 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.

### **USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing 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 toxic to fish and aquatic invertebrates. 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 and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by disposing of equipment washwaters or rinsate. Avoid direct application and/or spray drift to bee hives.

### **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

**READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (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 the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls over short-sleeved shirt and short pants, chemical-resistant gloves, such as Barrier Laminate or Viton  $\geq$  14 mils, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure.

**DISCLAIMER, RISKS OF USING THIS PRODUCT,  
LIMITED WARRANTY  
AND LIMITATION OF LIABILITY**

**IMPORTANT:** Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.

**RISKS OF USING THIS PRODUCT**

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

**LIMITED WARRANTY**

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label and subject to the Risks of Using This Product as described above. EXCEPT AS SET FORTH ABOVE, VALENT MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED. No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

**LIMITATION OF LIABILITY**

In no event shall Valent or Seller be liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

**PROMPT NOTICE OF CLAIM**

Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

If Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

**NO AMENDMENTS**

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability, which may not be modified by any oral or written agreement.

**TANK MIXES**

**NOTICE:** Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor.

Read and follow the entire label of each product to be used in the tank mix with this product.

**RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management purposes, KNACK is a Group 7D insecticide. Any insect population may contain individuals naturally resistant to KNACK and other Group 7D insecticides. The resistant individuals dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by KNACK or other Group 7D insecticides, although local experts should be consulted for local resistance recommendations. The classification scheme is based on mode of action. It is recognized that resistance of insects and mites to insecticides and acaricides can also result from enhanced metabolism, reduced penetration or behavioral changes that are not linked to any site of action classification but are specific for individual chemicals or chemical groupings. Despite this, alternation of compounds from different chemical classes remains a viable management technique.

To delay insecticide resistance

- Avoid exclusive repeated use of insecticides from the same chemical subgroup.
- Integrate other control methods (chemical, cultural, biological) into insect control programs.

For further information contact your local distributor.



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## **GENERAL INFORMATION**

- Do not apply this product through any type of irrigation system.

**KNACK is intended for use in Insect Pest Management (IPM) or Insect Resistance Management (IRM) programs. KNACK will not control insect adults, and it is recommended to be used in combination and/or rotation with other IPM or IRM materials. Contact your local state extension service for details.**

KNACK acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

## COTTON

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

KNACK does exhibit translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROP  | PESTS  | PRODUCT RATE PER ACRE                                     | SPECIAL INSTRUCTIONS   |
|---|--|---|--|
| Cotton  | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly | 8 to 10 fl. oz.<br><br>Do not apply less than 8 fl. oz./A | Apply with air or ground equipment in adequate water for uniform coverage:<br><br>By Air: ..... 3 to 10 gals./A<br>By Ground:..... 10 to 50 gals./A<br><br><b>HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.</b><br><br>Make only one application per growing season.<br><br>Begin application when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).<br><br>Under severe pressure, use the higher recommended rates.<br><br>Only whole fields should be treated. |
| <ul style="list-style-type: none"> <li>• Do not apply within 28 days of harvest.</li> <li>• Do not make more than 1 KNACK application per growing season.</li> <li>• Do not exceed 10 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.067 lb. pyriproxyfen per acre per season.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after last application.</li> </ul> |  |   |  |

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to one application per growing season. KNACK Insect Growth Regulator may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl. oz. per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## POME FRUIT

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROP  | PESTS   | PRODUCT RATES PER ACRE  | SPECIAL INSTRUCTIONS  |
|---|---|-------------------------|---|
| <p><b>Pome Fruit:</b></p> <p>Apple<br/>Crabapple<br/>Loquat<br/>Mayhaw<br/>Quince</p> | <p>Codling Moth</p> <p>Suppression of:<br/>Pandemis Leafroller<br/>Obliquebanded Leafroller</p> | <p>13 to 16 fl. oz.</p> | <p>Apply by ground with airblast equipment in a minimum of 50 gals./A. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage</p> <p><b>1st Generation Codling Moth:</b> Apply at Biofix plus 100 degree days (this is usually close to petal fall). Make a second application 14 to 21 days later or timed to coincide with peak moth flights. For subsequent applications, if needed, apply other insecticides registered for Codling Moth control. The addition of oil has been shown to increase Codling Moth activity of KNACK. Follow local recommendations regarding in season use and rates of oil in your area.</p> <p><b>Obliquebanded and Pandemis Leafroller:</b> Apply to the overwintering larvae at the pink to petal fall tree growth stage. KNACK does not directly control the larvae but inhibits normal pupation and adult emergence</p> |
|   | <p>Florida Red Scale<br/>Lecanium Scale<br/>San Jose Scale</p>                                  | <p>13 to 16 fl. oz.</p> | <p>Apply by ground with airblast equipment in a minimum of 50 gals./A. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply at delayed dormant through pink. For delayed dormant use a superior spray oil at the manufacturer's recommended rate of oil. Under heavy scale pressure, use the higher rate of KNACK.</p> <p><b>Scale:</b> For control in-season, make application in cover sprays when scale crawlers first emerge. The use of oil at the crawler emergence stage has been shown to improve control. Follow local recommendations regarding in-season use and rates of oil in your area.</p>   |

continued

| CROP  | PESTS  | PRODUCT RATES PER ACRE  | SPECIAL INSTRUCTIONS   |
|---|--|-------------------------|--|
| <p><b>Pome Fruit</b><br/>(continued):</p> <p>Apple<br/>Crabapple<br/>Loquat<br/>Mayhaw<br/>Quince</p> | <p>Green Apple Aphid<br/>Rosy Apple Aphid<br/>Spirea Aphid<br/>Spotted Tentiform Leafminer<br/>Western Tentiform Leafminer</p> | <p>10 to 16 fl. oz.</p> | <p>Apply by ground with airblast equipment in a minimum of 50 gals./A. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage</p> <p><b>Leafminers:</b> Apply at peak moth flight for control of 1<sup>st</sup> or 2<sup>nd</sup> generation. This usually occurs at pre-pink to pink apple stage for 1<sup>st</sup> generation and 2<sup>nd</sup> cover for 2<sup>nd</sup> generation.</p> <p><b>Rosy Apple Aphid:</b> Apply at 1/2" green apple growth stage.</p> <p><b>Green Apple &amp; Spirea Aphid:</b> Apply when aphids first appear, but before aphids are colonized.</p> <p><b>TIMING IS CRITICAL FOR ACCEPTABLE APHID CONTROL.</b></p> |
| <p>Pear<br/>Oriental Pear</p>   | <p>Pear Psylla</p>   | <p>13 to 16 fl. oz.</p> | <p>Apply by ground with airblast equipment in 75 to 400 gals./A with a superior spray oil at manufacturer's recommended rates for the stage of growth. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply a single application during the delayed dormant to pink stage of growth at 16 fl. oz./A or make two applications from delayed dormant through petal fall stage of growth at 13 to 16 fl. oz./A. Make application just before sustained egg lay is anticipated.</p> <p><b>DO NOT USE SKIP ROWS DURING APPLICATION.</b></p> <p>For in-season control of pear psylla, use an insecticide recommended for this use.</p>  |
|   | <p>Lecanium Scale<br/>San Jose Scale</p>   | <p>13 to 16 fl. oz.</p> | <p>Apply by ground with airblast equipment in 100 to 400 gals./A at delayed dormant with a superior spray oil at the manufacturer's recommended rates. Under heavy scale pressure, use the higher rate.</p> <p>Apply in sufficient water volume for tree size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>For control of scale in-season make application in cover sprays when scale crawlers first emerge. The use of oil at the crawler emergence stage has been shown to improve performance. Follow local recommendations regarding in-season use and rates of oil in your area.</p>                                      |

continued

| CROP  | PESTS   | PRODUCT RATES PER ACRE  | SPECIAL INSTRUCTIONS   |
|---|---|-------------------------|--|
| <p>Pome Fruit (continued):</p> <p>Pear</p> <p>Oriental Pear</p>   | <p>Codling Moth</p> <p>Suppression of:<br/>Obliquebanded Leafroller<br/>Pandemis Leafroller</p> | <p>13 to 16 fl. oz.</p> | <p>Apply by ground with airblast equipment in 100 to 400 gals./A.</p> <p><b>1st Generation Codling Moth:</b> Apply at Biofix plus 100 degree days. Make a second application 14 to 21 days later or timed to coincide with peak moth flights. For subsequent applications, if needed, apply other insecticides registered for Codling Moth control. The addition of oil has been shown to increase Codling Moth activity of KNACK. Follow local recommendations regarding in-season use and rates of oil in your area.</p> <p>For additional generations apply other insecticides registered for Codling Moth Control.</p> |
| <p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.</p> <ul style="list-style-type: none"> <li>• Do not apply within 45 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.218 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |   |                         |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## CITRUS (Including Ugli Fruit and White Sapote)

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROP  | PESTS  | PRODUCT RATES<br>PER ACRE | SPECIAL INSTRUCTIONS  |
|---|--|---------------------------|---|
| Citrus<br>Ugli Fruit<br>White Sapote  | Black Scale<br>Brown Soft Scale<br>California Red Scale<br>Florida Red Scale<br>Snow Scale | 16 fl. oz.                | <p>Apply with ground equipment in 200 to 1500 gals./A. Apply in sufficient water volume for tree size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply anytime prior to fruit becoming infested when scale is in the crawler stage. Application at the 2<sup>nd</sup> or 3<sup>rd</sup> generation of scale may result in excessive dead scale remaining on the fruit at harvest. Thorough coverage is essential for good control.</p> <p>KNACK may be applied with superior spray oils at 1/2 to 1%. Follow the manufacturer's directions and recommendations on timing and rates.</p> <p>NOTE: For scale apply only one application during emergence of scale crawlers per calendar year.</p> |
|   | Citrus Black Fly<br>Citrus Leafminer<br>Citrus Whitefly                                    | 10 fl. oz.                | <p>Apply with ground application in 200 to 1,500 gals./A. Apply in sufficient water volume for tree size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply when pests are just beginning to build and before infestation has occurred. Thorough coverage is essential for good control.</p>  |
| <p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.</p> <ul style="list-style-type: none"> <li>• Do not apply within 1 day of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 26 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.134 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 21 days after last KNACK treatment.</li> </ul> |  |                           |   |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state, and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## TREE NUTS

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROP                            | PESTS   | PRODUCT RATES PER ACRE | SPECIAL INSTRUCTIONS   |
|---------------------------------|---|------------------------|--|
| <b>Tree Nuts:</b><br><br>Almond | Black Scale<br>San Jose Scale<br><br>Suppression of:<br>Peach Twig Borer  | 13 to 16 fl. oz.       | Apply with ground equipment in 100 to 400 gals./A. Coverage is essential for good control. Apply in sufficient water volume for tree size. Use of higher water volume will assure better coverage.<br><br>Apply at either dormant, delayed dormant or an in-season cover spray. At dormant, delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.<br><br>KNACK has provided good suppression of Peach Twig Borer when applied delayed dormant through bloom sprays. |
|                                 | Almond: <ul style="list-style-type: none"> <li>• Do not apply within 21 days of harvest.</li> <li>• Do not make more than 1 KNACK application per growing season.</li> <li>• Do not exceed 16 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.109 lb. pyriproxyfen per acre per season.</li> </ul> |                        |  |

continued

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to one application per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

| CROPS  | PESTS   | PRODUCT RATES PER ACRE | SPECIAL INSTRUCTIONS  |
|--|---|------------------------|---|
| <b>Tree Nuts</b><br>(continued):<br><br>Beechnut<br>Brazil<br>Butternut<br>Cashew<br>Chestnut<br>Chinquapin<br>Filbert (Hazelnut)<br>Hickory<br>Macadamia<br>Pecan<br>Pistachio<br>Walnut  | Codling Moth<br>Dusky Veined Aphid<br>Walnut Aphid  | 16 fl. oz.             | Apply with ground equipment in 100 to 400 gals./A. Apply in sufficient water volume for tree size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.<br><br><b>1st Generation Codling Moth:</b> Apply at Biofix plus 100 degree days. Make a second application 14 to 21 days later or timed to coincide with peak moth flights. For subsequent applications, if needed, apply other insecticides registered for Codling Moth control. The addition of oil has been shown to increase Codling Moth activity of KNACK. Follow local recommendations regarding in-season use and rates of oil in your area.  |
|  | Black Scale<br>Brown Soft Scale<br>Italian Scale<br>Lecanium Scale<br>San Jose Scale<br>Walnut Scale<br><br>Suppression of:<br>Peach Twig Borer | 13 to 16 fl. oz.       | Apply with ground equipment in 100 to 400 gals./A at either dormant, delayed dormant or an in-season cover spray. The addition of a superior spray oil at dormant or delayed dormant may improve scale control. However, do not use a spray oil in oil sensitive crops such as Walnut. Follow manufacturer's recommendations regarding use and rates of oil for your area.<br><br>In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.<br><br>Under heavy scale pressure, use the higher rate.<br><br>Coverage is essential for good control. Apply in sufficient water volume for tree size. Use of higher water volume will assure better coverage. |
| KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs. <ul style="list-style-type: none"> <li>• Do not apply within 21 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.218 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |   |                        |   |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.



## FRUITING VEGETABLES

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

KNACK does exhibit translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROPS   | PESTS  | PRODUCT RATES PER ACRE  | SPECIAL INSTRUCTIONS  |
|---|--|---|---|
| <b>Fruiting Vegetables:</b><br><br>Eggplant<br>Ground Cherry<br>Okra<br>Pepino<br>Pepper<br>Tomatillo<br>Tomato   | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly   | 8 to 10 fl. oz.<br><br>Do not apply less than 8 fl. oz./A. of KNACK when used as a stand alone application.         | Apply with air or ground equipment in adequate water for uniform coverage:<br>By Air:.....3 to 10 gals./A.<br>By Ground:.....10 to 50 gals/A.<br><br><b>HIGHER WATER VOLUMES PROVIDE IMPROVED INSECT CONTROL.</b><br><br>Begin application when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures). Under severe pressure, use the higher recommended rates.<br><br>Only whole fields should be treated.        |
|   | Banded Wing Whitefly<br>Cabbage Looper<br>Green Peach Aphid<br>Greenhouse Whitefly (immatures & adults)<br>Silverleaf Whitefly<br>Sweetpotato Whitefly<br>Tobacco Hornworm | 6 to 8 fl. oz.<br><br>+<br><br>ORTHENE® 75 S<br>0.66 to 1.33 lbs./A<br><br>or<br><br>ORTHENE 97<br>0.5 to 1.0 lb./A | Apply as a tank mix with ground equipment for uniform coverage (25 to 150 gals./A. by ground). Make application when eggs or insects first appear. If control is needed during this period use an alternate insecticide registered for the target pest.<br><br>KNACK may also be mixed or alternated with commonly used insecticides to comply with local IPM programs.<br><br>Comply with all applicable directions, restrictions and precautions on the registered labels for ORTHENE 75 S or ORTHENE 97. |
| <ul style="list-style-type: none"> <li>• Do not apply within 14 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.109 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> </ul> |  |   |   |

continued

| CROP  | PESTS   | PRODUCT RATES PER ACRE   | SPECIAL INSTRUCTIONS  |
|---|---|--|---|
| <b>Fruiting Vegetables (continued):</b><br><br>Tomato   | Banded Wing Whitefly<br>Beet Armyworm<br>Fruitworm<br>Greenhouse Whitefly (immatures & adults)<br>Potato Aphid<br>Silverleaf Whitefly<br>Sweetpotato Whitefly<br>Thrips<br>Tomato Pinworm<br>Yellowstriped Armyworm | 6 to 8 fl. oz.<br><br>+<br><br>MONITOR® 4 Spray<br>24 fl. oz.<br><br>+<br><br>DANITOL® 2.4 EC Spray<br>10½ fl. oz. | <p><b>EARLY SEASON WHITEFLY CONTROL PROGRAM FOR REDUCTION OF GEMINIVIRUS:</b> Apply as a tank mix with ground equipment for uniform coverage (10 to 120 gals./A). Make application when scouting first indicates adult whiteflies are on young plants. <b>NOTE:</b> This may result in treatment immediately following transplanting.</p> <p><b>MID TO LATE SEASON WHITEFLY CONTROL PROGRAM FOR PREVENTION OF IRREGULAR FRUIT RIPENING:</b> Apply as a tank mix with ground equipment for uniform coverage (20 to 120 gals./A. by ground). Make application when scouting indicates whiteflies are present.</p> <p>KNACK may also be mixed or alternated with commonly used insecticides to comply with local IPM programs.</p> <p>Comply with all applicable directions, restrictions and precautions on the registered labels for MONITOR 4 Spray and DANITOL 2.4 EC Spray.</p> |
| <ul style="list-style-type: none"> <li>• Do not apply within 14 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 16 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.134 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> </ul> |   |  |   |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## STONE FRUIT

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROPS   | PESTS  | PRODUCT RATES PER ACRE | SPECIAL INSTRUCTIONS   |
|---|--|------------------------|--|
| <b>Stone Fruit:</b><br><br>Apricot<br>Cherry<br>Chickasaw Plum<br>Damson Plum<br>Fresh Prune<br>Japanese Plum<br>Nectarine<br>Peach<br>Plum<br>Plumcot<br>Prune   | Lecanium Scale<br>San Jose Scale                           | 13 to 16 fl. oz.       | Apply in 100 to 400 gals./A. with ground equipment. Coverage is essential for good control. Apply in sufficient water volume for tree size. Use of higher water volume will assure better coverage.<br><br><b>Scale:</b> Apply at dormant, delayed dormant or as an in-season cover spray. At dormant, delayed dormant, use a spray oil at the manufacturer's recommended oil rate.<br><br>Under heavy scale pressure, use the higher rate of KNACK.<br><br><b>Peach Twig Borer:</b> KNACK has provided good suppression of Peach Twig Borer when applied delayed dormant through bloom sprays. Use a spray oil at the manufacturer's recommended rate for the stage of crop growth. |
|   | Suppression of:<br>Peach Twig Borer<br>Oriental Fruit Moth |                        | In-season sprays of KNACK may not protect fruit from blemishes by scale.<br><br>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.   |
| <ul style="list-style-type: none"> <li>• Do not apply within 14 days of harvest.</li> <li>• Do not make more than 3 KNACK applications per growing season.</li> <li>• Do not exceed 48 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.327 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |  |                        |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to three applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## BRASSICA LEAFY VEGETABLES

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

KNACK does exhibit translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROPS  | PESTS  | PRODUCT RATES<br>PER ACRE | SPECIAL INSTRUCTIONS  |
|--|--|---------------------------|---|
| <b>Brassica Leafy Vegetables:</b><br><br>Broccoli<br>Broccoli Raab (rapini)<br>Brussels Sprouts<br>Cabbage<br>Cauliflower<br>Cavalo Broccolo<br>Chinese Broccoli (gailon)<br>Chinese Cabbage<br>(bok choy and napa)<br>Chinese Mustard (gai choy)<br>Collards<br>Kale<br>Kohlrabi<br>Mizuna<br>Mustard Greens<br>Mustard Spinach<br>Rape Greens  | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly | 8 to 10 fl. oz.           | Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals./A).<br><br><b>HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.</b><br><br>Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).<br><br>Under severe pressure, use the higher recommended rates.<br><br>Only whole fields should be treated. |
| <ul style="list-style-type: none"> <li>• Do not apply within 7 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.134 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> </ul> |  |                           |   |

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl. oz./A for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal IPM and Integrated Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

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## OLIVE

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROP   | PESTS                         | PRODUCT RATES PER ACRE | SPECIAL INSTRUCTIONS   |
|--|-------------------------------|------------------------|--|
| Olive  | Black Scale<br>San Jose Scale | 13 to 16 fl. oz.       | <p>Apply with ground equipment in 100 to 400 gals./A. Apply in sufficient water volume for tree size. Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply at either dormant, delayed dormant or an in-season cover spray. At dormant, delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.</p> <p>Under heavy scale pressure, use the higher rate of KNACK.</p> |
| <p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.</p> <ul style="list-style-type: none"> <li>• Do not apply within 7 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.218 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |                               |                        |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## CUCURBITS

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

KNACK does exhibit translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROPS  | PESTS  | PRODUCT RATES PER ACRE                                    | SPECIAL INSTRUCTIONS   |
|--|--|---|--|
| <b>Cucurbits:</b><br>Balsam Apple<br>Balsam Pear<br>Bitter Melon<br>Cantaloupe<br>Chayote<br>Chinese Cucumber<br>Chinese Waxgourd<br>Citron Melon<br>Cucumber<br>Edible Gourd<br>Gherkin<br><i>Momordica</i> spp.<br>Muskmelon<br>Pumpkin<br>Summer Squash<br>Watermelon<br>Winter Squash  | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly | 8 to 10 fl. oz.<br><br>Do not apply less than 8 fl. oz./A | Apply with air or ground equipment in adequate water for uniform coverage:<br>By air.....3 to 10 gals./A<br>By Ground...10 to 50 gals./A<br><br><b>HIGHER WATER VOLUMES PROVIDE IMPROVED INSECT CONTROL.</b><br><br>Begin application when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).<br><br>Under severe pressure, use the higher recommended rates.<br><br>Only whole fields should be treated. |
| <ul style="list-style-type: none"> <li>• Do not apply within 7 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.134 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> </ul> |  |   |  |

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides or insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl. oz. per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal IPM and Integrated Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## TROPICAL & SUBTROPICAL FRUIT

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROPS   | PEST  | PRODUCT RATE<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|---|-------|--------------------------|--|
| <b>Tropical &amp; Subtropical Fruit:</b><br>Acerola<br>Atemoya<br>Avocado<br>Biriba<br>Black Sapote<br>Canistel<br>Cherimoya<br>Custard Apple<br>Feijoa<br>Guava<br>Ilima<br>Jaboticaba<br>Longan<br>Lychee<br>Mamey Sapote<br>Mango<br>Passionfruit<br>Papaya<br>Pulasan<br>Rambutan<br>Sapodilla<br>Soursop<br>Spanish Lime<br>Star Apple<br>Starfruit<br>Sugar Apple<br>Wax Jambu                            | Scale | 16 fl. oz.               | Apply with ground or air equipment as a full coverage spray (minimum of 5 gals./A by air or 50 gals./A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.<br><br>Apply at either dormant, delayed dormant or an in-season cover spray. At dormant or delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area. |
| KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and resistance management programs.  |       |                          |  |
| <ul style="list-style-type: none"> <li>• Do not apply within 14 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.218 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |       |                          |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## BUSHBERRIES

**GENERAL:** KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

| CROPS  | PESTS   | PRODUCT RATE PER ACRE | SPECIAL INSTRUCTIONS   |
|--|---|-----------------------|--|
| <b>Bushberries:</b><br><br>Blueberry<br>Currant<br>Elderberry<br>Gooseberry<br>Huckleberry<br>Juneberry<br>Lingonberry<br>Salal  | Cherry Fruitworm<br>Cranberry Fruitworm<br>Lecanium Scale | 16 fl. oz             | Apply with ground or air equipment as a full coverage spray (minimum of 5 gals./A by air or 50 gals./A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.<br><br><b>Fruitworms:</b> Apply when egg laying begins and again at petal fall. Additional applications of another insecticide, at 10 – 14 day intervals, may be needed under high population pressure or sustained moth flight.<br><br><b>Lecanium Scale:</b> Apply at either dormant, delayed dormant or an in-season cover spray. At dormant or delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area. |
| KNACK may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and Resistance Management programs.   |   |                       |  |
| <ul style="list-style-type: none"> <li>• Do not apply within 7 days of harvest.</li> <li>• Do not make more than 2 KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. of KNACK per acre per season.</li> <li>• Regardless of formulation do not exceed 0.218 lb. pyriproxyfen per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> </ul> |   |                       |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.



## STRAWBERRY

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

KNACK exhibits translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROP  | PESTS  | PRODUCT RATE<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|---|--|--------------------------|--|
| Strawberry  | Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly | 10 fl. oz.               | <p>Apply with ground equipment as a full coverage spray (100 to 400 gals./A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).</p> <p>Under severe pressure, use the higher recommended rates.</p> <p>Only whole fields should be treated.</p> |
| <ul style="list-style-type: none"> <li>• Do not apply within 2 days of harvest.</li> <li>• Do not make more than two (2) KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Do not apply earlier than 30 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> <li>• Regardless of formulation, do not apply more than 0.134 lb. of pyriproxyfen per acre per season.</li> </ul> |  |                          |  |

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Integrated Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## GRAPE

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

| CROP  | PESTS   | PRODUCT RATE PER ACRE | SPECIAL INSTRUCTIONS  |
|-------|---|-----------------------|---|
| Grape | Glassy-Winged Sharpshooter<br>Grape Berry Moth<br>Lecanium Scale  | 16 fl. oz.            | Apply with ground equipment as a full coverage spray (50 to 200 gals./A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.<br><br><b>Lecanium Scale:</b> Apply at either dormant, delayed dormant or an in-season cover spray. At dormant, delayed dormant you may use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge.<br><br>Follow local recommendations regarding in-season use and rates of oil in your area. |
|       | <ul style="list-style-type: none"> <li>• Do not apply within 21 days of harvest.</li> <li>• Do not make more than two (2) KNACK applications per growing season.</li> <li>• Do not exceed 32 fl. oz. KNACK per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Regardless of formulation, do not apply more than 0.22 lb. active of pyriproxyfen per acre per season.</li> </ul> |                       |   |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

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## LEGUME VEGETABLES (Except Soybean)

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

KNACK exhibits translaminar movement which means that KNACK applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

| CROP                                  | PESTS   | PRODUCT RATES<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|---------------------------------------|---|---------------------------|--|
| Legume Vegetables<br>(except Soybean) | Silverleaf Whitefly<br>Sweetpotato Whitefly   | 8 to 10 fl. oz.           | <p><b>EARLY SEASON WHITEFLY PROGRAM:</b><br/>Apply with ground equipment in adequate water for uniform coverage. (10 to 50 gals./A. Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).</p> <p>Under severe pressure, use the higher recommended rates.</p> <p>Only whole fields should be treated.</p> |
|                                       | <ul style="list-style-type: none"> <li>• Do not apply within 7 days of harvest.</li> <li>• Do not make more than two (2) KNACK applications per growing season.</li> <li>• Do not exceed 20 fl. oz. KNACK per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> <li>• Regardless of formulation, do not apply more than 0.134 lb. of pyriproxyfen per acre per season.</li> </ul> |                           |  |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## ONION (DRY BULB ONLY)

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

| CROP                  | PESTS  | PRODUCT RATES PER ACRE | SPECIAL INSTRUCTIONS  |
|-----------------------|--|------------------------|---|
| Onion (Dry Bulb Only) | Onion Thrips<br>Western Flower Thrips  | 8 fl. oz.              | <b>FOR SUPPRESSION OF ONION THRIPS:</b> Apply with ground equipment in adequate water for uniform coverage. (20 to 50 gals./A) Begin applications when thrips reach threshold levels per University/Extension. Thorough coverage is critical for adequate water volume to ensure thorough coverage. |
|                       | <ul style="list-style-type: none"> <li>• Do not apply within 3 days of harvest.</li> <li>• Do not make more than two (2) KNACK applications per growing season.</li> <li>• Do not exceed 16 fl. oz. KNACK per acre per season.</li> <li>• Do not apply earlier than 14 days after last KNACK treatment.</li> <li>• Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</li> <li>• Regardless of formulation, do not apply more than 0.11 lb. of pyriproxyfen per acre per season.</li> </ul> |                        |   |

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

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## STORAGE AND DISPOSAL

### PROHIBITIONS

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

### PESTICIDE STORAGE

Store in a cool dry place.

Keep pesticide in original container.

Keep container closed when not in use.

Do not put concentrate or dilute into food or drink containers.

Not for use or storage in or around the home.

For help with any spill, leak, fire or exposure involving this material, call day or night 1-800-892-0099.

### 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). Do not reuse container. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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Manufactured for:

**Valent U.S.A. Corporation**

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