GROUP 7C INSECTICIDE





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

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

Contains 0.86 pound ai per gallon.

Contains aromatic petroleum distillates.

EPA Reg. No. 59639-95 EPA Est. 39578-TX-1

# KEEP OUT OF REACH OF CHILDREN CAUTION

SEE BELOW FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

### 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 hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

### FIRST AID

If on skin: 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 contin-

ue rinsing.

Call a poison control center or doc-

tor for treatment advice.

(continued)

### FIRST AID (continued)

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 doc-

tor 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 **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):

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 ≥ 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 exist, 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 (WPS), 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the REI of 12 hours.

PPE required for early entry to treated areas that is permitted under the WPS 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 ≥ 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 PROD-UCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND TO THE FULLEST EXTENT ALLOWED BY LAW, AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICA-TION 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.

(continued)

(continued)

### **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. To the extent consistent with applicable law AND 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**

To the fullest extent allowed by law, Valent or Seller is not 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. TO THE FULL-EST EXTENT ALLOWED BY LAW, THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR SELL-ER FOR ANY AND ALL CLAIMS, LOSSES, INJU-**RIES OR DAMAGES (INCLUDING CLAIMS BASED** ON BREACH OF WARRANTY, CONTRACT, NEGLI-**GENCE, 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 REPLACE-**MENT OF THE PRODUCT.

#### PROMPT NOTICE OF CLAIM

To the extent consistent with applicable law allowing such requirements, 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.

To the extent consistent with applicable law, 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, to the extent allowed by applicable law.

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® Insect Growth Regulator is a Group 7C insecticide. Any insect population may contain individuals naturally resistant to Knack Insect Growth Regulator and other Group 7C insecticides. The resistant individuals dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by Knack Insect Growth Regulator or other Group 7C 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.

#### PRODUCT INFORMATION

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

Knack Insect Growth Regulator is intended for use in Integrated Pest Management (IPM) or Insect Resistance Management (IRM) programs. Knack Insect Growth Regulator 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 Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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.

### **ARTICHOKE (GLOBE)\***

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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* Insect Growth Regulator does exhibit translaminar movement which means that *Knack* Insect Growth Regulator 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.

| PESTS  | PRODUCT<br>RATES<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|--|------------------------------|--|
| Artichoke Plum Moth<br>Banded Wing Whitefly                  | 8 to 10 fl oz                | Apply with ground equipment in adequate water for uniform coverage (10 to 50 gal/A).   |
| Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly |                              | HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.  |
| Owodipotato Wintony  |                              | 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). |
| *Not for use in  |                              | Under severe pressure, use the higher recommended rates.   |
| California.  |                              | Only whole fields should be treated.   |

Knack Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

- Do not apply within 7 days of harvest.
- Do not make more than 2 *Knack* Insect Growth Regulator applications per growing season.
- Do not exceed 20 fl oz of *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

**MANAGING INSECT 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. LLC is restricting *Knack* Insect Growth Regulator to no more than 2 applications 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 IRM recommendations. Read and follow all product labels before applying any insecticide.

#### **ASPARAGUS\***

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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 Insect Growth Regulator does exhibit translaminar movement which means that Knack Insect Growth Regulator 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.

| PEST            | PRODUCT<br>RATES<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|-----------------|------------------------------|--|
| Whitefly        | 8 to 10 fl oz                | Apply with ground equipment in adequate water for uniform coverage (10 to 50 gal/A).   |
|                 |                              | HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.  |
|                 |                              | 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). |
| *Not for use in |                              | Under severe pressure, use the higher recommended rates.   |
| California.     |                              | Only whole fields should be treated.   |

- Do not apply within 7 days of harvest.
- Do not make more than 2 *Knack* Insect Growth Regulator applications per growing season.
- Do not exceed 20 fl oz of *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

**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. LLC is restricting *Knack* Insect Growth Regulator to no more than 2 applications 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 Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

#### **BANANA AND PLANTAIN\***

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since Knack Insect Growth Regulator 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 Insect Growth Regulator does exhibit translaminar movement which means that Knack Insect Growth Regulator 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.

| PESTS  | PRODUCT<br>RATES<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|--|------------------------------|--|
| Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly | 13 to 16 fl oz               | Apply with air or ground equipment in adequate water for uniform coverage:  By Air: 3 to 10 gal/A  By Ground: 10 to 50 gal/A   |
|  |                              | HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.  |
| *Not for use in  |                              | 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). |
| California.  |                              | Only whole fields should be treated.   |

- Do not apply within 14 days of harvest.
- Do not make more than 3 Knack Insect Growth Regulator applications per growing season.
- Do not exceed 48 fl oz of *Knack* Insect Growth Regulator per acre per calendar year.
- Regardless of formulation do not apply more than 0.323 lb pyriproxyfen per acre per calendar year.
- Do not apply earlier than 14 days after last Knack Insect Growth Regulator treatment.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

**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. LLC is restricting *Knack* Insect Growth Regulator to no more than 3 applications 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 13 fl oz per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. 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.

#### **BERRY**

### Low Growing, Except Strawberry (Subgroup 13-07H)

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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<br>RATE<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|---|---|-----------------------------|--|
| Bearberry<br>Bilberry<br>Blueberry, Lowbush<br>Cloudberry<br>Cranberry<br>Lingonberry | 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 gal/A by air or 50 gal/A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.   |
| Muntries Partridgeberry Cultivars, varieties, and/or hybrids of these                 |   |                             | Fruitworms: Apply when egg laying begins and again at petal fall. Additional applications of another insecticide, at 10-to 14-day intervals, may be needed under high population pressure or sustained moth flight.  |
|   |   |                             | Lecanium Scale: 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 Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

- Do not apply within 7 days of harvest.
- Do not make more than 2 Knack Insect Growth Regulator applications per growing season.
- Do not exceed 32 floz of *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last Knack Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.215 lb pyriproxyfen per acre per calendar year.

## **BRASSICA LEAFY VEGETABLES**

### (Crop Group 5)

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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 Insect Growth Regulator does exhibit translaminar movement which means that Knack Insect Growth Regulator 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<br>RATES<br>PER ACRE | SPECIAL INSTRUCTIONS  |
|--|--|------------------------------|---|
| Broccoli<br>Broccoli Raab (Rapini)<br>Brussels Sprouts                                     | Banded Wing<br>Whitefly<br>Greenhouse    | 8 to 10 fl oz                | Apply with ground equipment in adequate water for uniform coverage (10 to 50 gal/A).  |
| Cabbage<br>Cauliflower<br>Cavalo Broccolo  | Whitefly Silverleaf Whitefly Sweetpotato |                              | HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.   |
| Chinese Broccoli<br>(Gai Lon)<br>Chinese Cabbage<br>(bok choy and napa)<br>Chinese Mustard | Whitefly                                 |                              | 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). |
| (Gai Choy)<br>Collards<br>Kale   |  |                              | Under severe pressure, use the higher recommended rates.  |
| Kohlrabi<br>Mizuna<br>Mustard Greens<br>Mustard Spinach<br>Rape Greens<br>Turnip Greens    |  |                              | Only whole fields should be treated.  |

- Do not apply within 7 days of harvest.
- Do not make more than 2 *Knack* Insect Growth Regulator applications per growing season.
- Do not exceed 20 fl oz *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last Knack Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

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. LLC is restricting Knack Insect Growth Regulator to no more than 2 applications 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/A for whitefly control because reduced rates can lead to a greater potential for resistance development. 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.

## BULB VEGETABLES (Crop Group 3-07)

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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<br>RATE<br>PER ACRE | SPECIAL INSTRUCTIONS  |
|---|--|-----------------------------|---|
| Garlic* Garlic, Great Headed Leek* Onion, Dry Bulb Onion, Green* Onion, Welsh* Shallot* *Not For Use in California. | Onion Thrip<br>Western Flower<br>Thrip | 8 fl oz                     | FOR SUPPRESSION OF THRIPS: Apply with ground equipment in adequate water for uniform coverage (20 to 50 gal/A). Begin applications when thrips reach threshold levels per University/ Extension. Thorough coverage is critical for adequate water volume to ensure thorough coverage. |

Knack Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

- Do not apply within 3 days of harvest.
- Do not make more than 2 *Knack* Insect Growth Regulator applications per growing season.
- Do not exceed 16 fl oz of *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.108 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

### BUSHBERRY (Subgroup 13-07B)

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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<br>RATE<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|---|---|-----------------------------|--|
| Aronia Berry<br>Blueberry, Highbush<br>Blueberry, Lowbush<br>Buffalo Currant<br>Chilean Guava<br>Cranberry, Highbush                | 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 gal/A by air or 50 gal/A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.   |
| Currant, Black Currant, Red Elderberry European Barberry Gooseberry Honeysuckle, Edible Huckleberry                                 |   |                             | Fruitworms: Apply when egg laying begins and again at petal fall. Additional applications of another insecticide, at 10-to 14-day intervals, may be needed under high population pressure or sustained moth flight.  |
| Jostaberry Juneberry (Saskatoon Berry) Lingonberry Native Currant Salal Sea Buckthorn Cultivars, varieties, and/or hybrids of these |   |                             | Lecanium Scale: 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* Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

- Do not apply within 7 days of harvest.
- Do not make more than 2 Knack Insect Growth Regulator applications per growing season.
- Do not exceed 32 fl oz of *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last Knack Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.215 lb pyriproxyfen per acre per calendar year.

## **CANEBERRY**

(Subgroup 13-07A)

GENERAL: Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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 twicel contact insecticides. than typical contact insecticides.

| CROPS  | PESTS   | PRODUCT<br>RATE<br>PER ACRE   | SPECIAL INSTRUCTIONS   |
|--|---|---|--|
| Blackberry including: Bingleberry Black Satin Berry Boysenberry Cherokee Blackberry Chesterberry       | 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 gal/A by air or 50 gal/A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.   |
| Cheyenne Blackberry Coryberry Darrowberry Dewberry Dirksen Thornless Berry Himalayaberry               |   |   | Fruitworms: Apply when egg laying begins and again at petal fall. Additional applications of another insecticide, at 10-to 14-day intervals, may be needed under high population pressure or sustained moth flight.  |
| Hullberry Lavacaberry Lowberry Lucretiaberry Mammoth Blackberry Marionberry Nectarberry Olallieberry   |   |   | Lecanium Scale: Apply at either dormant, delayed dormant or use an in-season cover spray. At dormant or delayed dormant 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. |
| Oregon Evergreen Berry Phenomenalberry Rangerberry Ravenberry Rossberry Shawnee Blackberry (continued) | ly used insecticides to Insect Resistance Ma  Do not apply within  Do not make more thing season.  Do not exceed 32 flayear.  Do not apply earlier treatment. | o comply with loc<br>nagement (IRM)<br>7 days of harvest<br>nan 2 <i>Knack</i> Insec<br>oz of <i>Knack</i> Insec<br>than 14 days afte | e mixed and/or alternated with common-<br>al Integrated Pest Management (IPM) and<br>programs.   |

(continued)

## **CANEBERRY** (continued) (Subgroup 13-07A)

| CROPS  | PESTS   | PRODUCT<br>RATE<br>PER ACRE   | SPECIAL INSTRUCTIONS   |
|--|---|---|--|
| (continued) Loganberry Raspberry, including: Bababerry Black Raspberry Blackcap                                | 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 gal/A by air or 50 gal/A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.   |
| Caneberry Framboise Frambueso Himbeere Keriberry Mayberry Red Raspberry  |   |   | Fruitworms: Apply when egg laying begins and again at petal fall. Additional applications of another insecticide, at 10-to 14-day intervals, may be needed under high population pressure or sustained moth flight.  |
| Thimbleberry Tulameen Yellow Raspberry Wild Raspberry Youngberry Cultivars, varieties, and/or hybrids of these |   |   | Lecanium Scale: Apply at either dormant, delayed dormant or use an in-season cover spray. At dormant or delayed dormant 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. |
|  | ly used insecticides to Insect Resistance Ma  Do not apply within  Do not make more thing season.  Do not exceed 32 flayear.  Do not apply earlier treatment. | o comply with loc<br>nagement (IRM)<br>7 days of harvest<br>aan 2 <i>Knack</i> Insec<br>oz of <i>Knack</i> Insec<br>than 14 days afte |  |

#### 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 Insect Growth Regulator 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 Insect Growth Regulator does exhibit translaminar movement which means that Knack Insect Growth Regulator 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.

| PESTS  | PRODUCT<br>RATES<br>PER ACRE                   | SPECIAL INSTRUCTIONS  |
|--|--|---|
| Banded Wing Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato Whitefly | 8 to 10 fl oz Do not apply less than 8 fl oz/A | Apply with air or ground equipment in adequate water for uniform coverage:  By Air: 3 to 10 gal/A  By Ground: 10 to 50 gal/A  |
|  | 3 H 02,7 t                                     | HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.   |
|  |  | Make only one application per growing season.   |
|  |  | 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.  |
|  |  | Only whole fields should be treated.  |

- Do not apply within 28 days of harvest.
- Do not make more than 1 Knack Insect Growth Regulator application per growing season.
- Do not exceed 10 fl oz *Knack* Insect Growth Regulator per acre per calendar year.
- Regardless of formulation do not apply more than 0.067 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after last application.

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. LLC is restricting *Knack* Insect Growth Regulator to 1 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 Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## CUCURBITS (Crop Group 9)

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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 Insect Growth Regulator does exhibit translaminar movement which means that Knack Insect Growth Regulator 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<br>RATES<br>PER ACRE                            | SPECIAL INSTRUCTIONS  |
|---|---|---|---|
| Balsam Apple Balsam Pear Bitter Melon Cantaloupe Chayote Chinese Cucumber Chinese Waxgourd Citron Melon Cucumber Edible Gourd Gherkin Momordica spp. Muskmelon Pumpkin Summer Squash Watermelon Winter Squash | Banded Wing<br>Whitefly<br>Greenhouse<br>Whitefly<br>Silverleaf Whitefly<br>Sweetpotato<br>Whitefly | 8 to 10 fl oz<br>Do not apply<br>less than<br>8 fl oz/A | Apply with air or ground equipment in adequate water for uniform coverage: By Air: 3 to 10 gal/A By Ground: 10 to 50 gal/A  HIGHER WATER VOLUMES PROVIDE IMPROVED INSECT CONTROL. 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. Only whole fields should be treated. |

- Do not apply within 7 days of harvest.
- Do not make more than 2 *Knack* Insect Growth Regulator applications per growing season.
- Do not exceed 20 fl oz *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

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. LLC is restricting *Knack* Insect Growth Regulator to no more than 2 applications 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 Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## FRUITING VEGETABLES (Crop Group 8-10)

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since Knack Insect Growth Regulator 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 Insect Growth Regulator does exhibit translaminar movement which means that Knack Insect Growth Regulator 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<br>RATES<br>PER ACRE   | SPECIAL INSTRUCTIONS  |
|---|--|--|---|
| African Eggplant Bush Tomato Bell Pepper Cocona Currant Tomato Eggplant Garden Huckleberry Goji Berry Ground Cherry Martynia Naranjilla Okra Pea Eggplant Pepper, Nonbell Roselle Scarlet Eggplant Sunberry Tomatillo Tomato Tree Tomato Cultivars, varieties, and/or hybrids of these  Banded Wing Whitefly Silverleaf Whitefly Sweetpotato Whitefly Cabbage Looper Green Peach Aphid Greenhouse Whitefly Cabbage Looper Green Peach Aphid Greenhouse Whitefly Silverleaf Whitefly Silverleaf Whitefly Silverleaf Whitefly Silverleaf Whitefly Sweetpotato Whitefly Tobacco Hornworm | Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato   | 8 to 10 fl oz  Do not apply less than 8 fl oz/A of Knack Insect Growth Regulator when used as a stand-alone application. | Apply with air or ground equipment in adequate water for uniform coverage: By Air: 3 to 10 gal/A By Ground: 10 to 50 gal/A HIGHER WATER VOLUMES PROVIDE IMPROVED INSECT CONTROL. 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. Only whole fields should be treated.  |
|   | Whitefly Cabbage Looper Green Peach Aphid Greenhouse Whitefly (immatures & adults) Silverleaf Whitefly Sweetpotato | 6 to 8 fl oz   | Apply as a tank mix with ground equipment for uniform coverage (25 to 150 gal/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.  Knack Insect Growth Regulator may also be mixed or alternated with commonly used insecticides to comply with local IPM programs.  Comply with all applicable directions, restrictions and precautions on the registered tank mix partner label. |

*Knack* Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

- Do not apply within 1 day of harvest.
- Do not make more than 2 Knack Insect Growth Regulator applications per growing season.
- Do not exceed 16 fl oz Knack Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.108 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

(continued)

## FRUITING VEGETABLES (continued) (Crop Group 8-10)

| CROP   | PESTS  | PRODUCT<br>RATES<br>PER ACRE                                  | SPECIAL INSTRUCTIONS   |
|--------|--|---|--|
| Tomato | Banded Wing Whitefly Beet Armyworm Fruitworm Greenhouse Whitefly (immatures & adults) Potato Aphid Silverleaf Whitefly Sweetpotato Whitefly Thrips Tomato Pinworm Yellowstriped Armyworm | 6 to 8 fl oz<br>+<br>Danitol® 2.4<br>EC Spray<br>10-2/3 fl oz | EARLY SEASON WHITEFLY CONTROL PROGRAM FOR REDUCTION OF GEMINIVIRUS:  Apply as a tank mix with ground equipment for uniform coverage (10 to 120 gal/A). Make application when scouting first indicates adult whiteflies are on young plants. NOTE: This may result in treatment immediately following transplanting.  MID TO LATE SEASON WHITEFLY CONTROL PROGRAM FOR PREVENTION OF IRREGULAR FRUIT RIPENING: Apply as a tank mix with ground equipment for uniform coverage (20 to 120 gal/A by ground). Make application when scouting indicates whiteflies are present.  Knack Insect Growth Regulator may also be mixed or alternated with commonly used insecticides to comply with local IPM programs.  Comply with all applicable directions, restrictions and precautions on the registered label for Danitol 2.4 EC Spray. |

*Knack* Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

- Do not apply within 14 days of harvest.
- Do not make more than 2 Knack Insect Growth Regulator applications per growing season.
- Do not exceed 16 fl oz *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.108 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

#### **GRAPE**

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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.

| PESTS   | PRODUCT<br>RATE<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|---|-----------------------------|--|
| Glassy-Winged<br>Sharpshooter<br>Grape Berry Moth<br>Lecanium Scale | 16 fl oz                    | Apply with ground equipment as a full coverage spray (50 to 200 gal/A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.  |
|   |                             | Lecanium Scale: 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. |
|   |                             | Follow local recommendations regarding in-season use and rates of oil in your area.  |

Knack Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

- Do not apply within 21 days of harvest.
- Do not make more than 2 Knack Insect Growth Regulator applications per growing season.
- Do not exceed 32 fl oz *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation, do not apply more than 0.215 lb pyriproxyfen per acre per calendar year.

## LEAFY VEGETABLES\*

### **Except Brassica Vegetables (Crop Group 4)**

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator 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 Insect Growth Regulator does exhibit translaminar movement which means that Knack Insect Growth Regulator 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<br>RATES<br>PER ACRE  | SPECIAL INSTRUCTIONS   |
|--|--|---|--|
| Amaranth<br>(Chinese Spinach)<br>Arugula (Roquette)  | Banded Wing<br>Whitefly<br>Greenhouse  | 8 to 10 fl oz   | Apply with ground equipment in adequate water for uniform coverage (10 to 50 gal/A).   |
| Cardoon<br>Celery<br>Celery, Chinese   | Whitefly Silverleaf Whitefly Sweetnotato   |   | HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.  |
| Celtuce<br>Chervil<br>Chrysanthemum,   | Sweetpotato<br>Whitefly  |   | Begin applications when whiteflies reach threshold levels per University/Extension recommendations.  |
| Edible-leaved<br>Chrysanthemum,<br>Garland   |  |   | Under severe pressure, use the higher recommended rates.   |
| Corn Salad   |  |   | Only whole fields should be treated.   |
| Cress, Garden Cress, Upland Dandelion Dock (Sorrel) Endive (Escarole) Fennel, Florence Lettuce, Head and Leaf Orach Parsley Purslane, Garden Purslane, Winter Radicchio (Red Chicory) Rhubarb Spinach New Zealand Spinach Vine Spinach Swiss Chard *Not For Use in California. | growing season.  Do not exceed 20 fleyear.  Do not apply earlier treatment.  Regardless of formuper calendar year.  Do not plant any cro | nan 2 <i>Knack</i> Insect ( oz <i>Knack</i> Insect ( than 14 days afte lation do not app op other than thos | st. Sect Growth Regulator applications per Growth Regulator per acre per calendar For last Knack Insect Growth Regulator Folly more than 0.134 lb pyriproxyfen per acre For see with registered pyriproxyfen uses in the last application. |

**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. LLC is restricting *Knack* Insect Growth Regulator to no more than 2 applications 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/A for whitefly control because reduced rates can lead to a greater potential for resistance development. 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.

## LEAVES OF ROOT & TUBER VEGETABLES\* Human Food or Animal Feed (Crop Group 2)

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since Knack Insect Growth Regulator 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 Insect Growth Regulator does exhibit translaminar movement which means that Knack Insect Growth Regulator 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<br>RATES<br>PER ACRE | SPECIAL INSTRUCTIONS  |
|---|--|------------------------------|---|
| Beet, Garden<br>Burdock, Edible<br>Carrot   | Banded Wing<br>Whitefly<br>Greenhouse    | 8 to 10 fl oz                | Apply with ground equipment in adequate water for uniform coverage (10 to 50 gal/A).  |
| Cassava, Bitter<br>Cassava, Sweet<br>Celeriac   | Whitefly Silverleaf Whitefly Sweetpotato |                              | HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.   |
| Chervil, Turnip-Rooted<br>Chicory<br>Dasheen (Taro)<br>Parsnip<br>Radish                            | Whitefly                                 |                              | 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). |
| Radish, Oriental<br>(Daikon)  |  |                              | Under severe pressure, use the higher recommended rates.  |
| Rutabaga Salsify, Black Sugar Beet Sweet Potato Tanier Turnip Yam, True *Not For Use in California. |  |                              | Only whole fields should be treated.  |

- Do not apply within 7 days of harvest.
- Do not make more than 2 *Knack* Insect Growth Regulator applications per growing season.
- Do not exceed 16 fl oz *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.107 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.
- Do not allow livestock to graze on treated areas.

**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. LLC is restricting *Knack* Insect Growth Regulator to no more than 2 applications 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/A for whitefly control because reduced rates can lead to a greater potential for resistance development. 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 Succulent or Dried (Crop Group 6)

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since Knack Insect Growth Regulator 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 Insect Growth Regulator does exhibit translaminar movement which means that Knack Insect Growth Regulator 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<br>RATES<br>PER ACRE   | SPECIAL INSTRUCTIONS  |
|--|--|--|---|
| Beans ( <i>Lupinus</i> ): Grain Lupin Sweet Lupin White Lupin White Sweet Lupin Beans ( <i>Phaseolus</i> ): Field Bean                                 | Banded Wing<br>Whitefly<br>Greenhouse<br>Whitefly<br>Silverleaf Whitefly<br>Sweetpotato<br>Whitefly  | 8 to 10 fl oz  | EARLY SEASON WHITEFLY PROGRAM: Apply with ground equipment in adequate water for uniform coverage (10 to 50 gal/A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage. |
| Kidney Bean Lima Bean Navy Bean Pinto Bean Runner Bean Snap Bean   |  |  | 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).   |
| Tepary Bean<br>Wax Bean  |  |  | Under severe pressure, use the higher recommended rates.  |
| Bean ( <i>Vigna</i> ):<br>Adzuki Bean  |  |  | Only whole fields should be treated.  |
| Asparagus Bean Blackeyed Pea Catjang Chinese Longbean Cowpea Crowder Pea Moth Bean Mung Bean Rice Bean Southern Pea Urd Bean Yardlong Bean (continued) | <ul> <li>ing season.</li> <li>Do not exceed 20 floyear.</li> <li>Do not apply earlier treatment.</li> <li>Regardless of formu per calendar year.</li> <li>Do not plant any crotreated areas soone</li> <li>Do not allow livestore</li> </ul> | ean 2 Knack Insect<br>oz of Knack Insect<br>than 14 days after<br>lation do not app<br>p other than those<br>r than 30 days after<br>ck to graze treater | et Growth Regulator applications per growet Growth Regulator per acre per calendar er last <i>Knack</i> Insect Growth Regulator bly more than 0.134 lb pyriproxyfen per acre se with registered pyriproxyfen uses in ter the last application.    |

(continued)

## LEGUME VEGETABLES (continued) Succulent or Dried (Crop Group 6)

| CROPS  | PESTS  | PRODUCT<br>RATES<br>PER ACRE  | SPECIAL INSTRUCTIONS  |
|--|--|---|---|
| (continued) Broad Bean (Fava) Chickpea (Garbanzo) Guar Jackbean Lablab Bean Lentil | Banded Wing<br>Whitefly<br>Greenhouse Whitefly<br>Silverleaf Whitefly<br>Sweetpotato<br>Whitefly   | 8 to 10 fl oz   | EARLY SEASON WHITEFLY PROGRAM: Apply with ground equipment in adequate water for uniform coverage (10 to 50 gal/A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage. |
| Pea ( <i>Pisum</i> ): Dwarf Pea Edible-podded Pea English Pea Field Pea Garden Pea |  |   | 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).  |
| Green Pea<br>Snowpea   |  |   | Under severe pressure, use the higher recommended rates.  |
| Sugar Snap Pea<br>Pigeon Pea   |  |   | Only whole fields should be treated.  |
| Soybean <sup>1</sup><br>Sword Bean   | growing season.  Do not exceed 20 fl oyear.  Do not apply earlier treatment.  Regardless of formu per calendar year.  Do not plant any crotreated areas soone  Do not allow livestoo | 7 days of harvest<br>nan 2 <i>Knack</i> Insect<br>oz of <i>Knack</i> Insect<br>than 14 days after<br>lation do not app<br>or ther than those<br>or than 30 days after than 30 days after the after the section in the | t. ect Growth Regulator applications per ect Growth Regulator per acre per calendar er last <i>Knack</i> Insect Growth Regulator ely more than 0.134 lb pyriproxyfen per acre se with registered pyriproxyfen uses in fter the last application.  |

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. LLC is restricting *Knack* Insect Growth Regulator to no more than 2 applications 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 Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## ROOT AND TUBER VEGETABLES\* (Crop Group 1)

**GENERAL**: *Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator 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 Insect Growth Regulator does exhibit translaminar movement which means that Knack Insect Growth Regulator 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<br>RATE<br>PER ACRE  | SPECIAL INSTRUCTIONS   |
|--|--|--|--|
| Arracacha<br>Arrowroot<br>Artichoke, Chinese   | Banded Wing<br>Whitefly<br>Greenhouse  |  | Apply with ground equipment in adequate water for uniform coverage (20 to 50 gal/A).   |
| Artichoke, Jerusalem<br>Beet, Garden<br>Beet, Sugar  | Whitefly<br>Silverleaf Whitefly<br>Sweetpotato   |  | HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.  |
| Burdock, Edible<br>Canna, Edible<br>Carrot<br>Cassava<br>(bitter and sweet)                      | <ul> <li>Do not apply within a Do not make more the ing season.</li> <li>Do not exceed 16 flow year.</li> <li>Do not apply earlier treatment.</li> <li>Regardless of formula per calendar year.</li> </ul> |  | 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).  |
| Celeriac Chaoyote (root) Chard Turnin rooted   |  |  | Under severe pressure, use the higher recommended rates.   |
| Chervil, Turnip-rooted<br>Chicory  |  |  | Only whole fields should be treated.   |
| Chufa Dasheen (Taro) Ginger Ginseng Horseradish Leren Parsley, Turnip-rooted Parsnip (continued) |  | nan 2 <i>Knack</i> Insectors of <i>Knack</i> Insectors of the sectors of the | ct Growth Regulator applications per grow- ct Growth Regulator per acre per calendar er last <i>Knack</i> Insect Growth Regulator ely more than 0.108 lb pyriproxyfen per acre se with registered pyriproxyfen uses in |
| *Not For Use in California.  | treated areas soone  • Do not allow livestoo   | r than 30 days af  | ter the last application.  |

(continued)

## ROOT AND TUBER VEGETABLES\* (continued) (Crop Group 1)

| (pp -)   |   |   |   |
|--|---|---|---|
| CROPS  | PESTS   | PRODUCT<br>RATE<br>PER ACRE   | SPECIAL INSTRUCTIONS  |
| (continued)<br>Potato<br>Radish                              | Banded Wing<br>Whitefly<br>Greenhouse<br>Whitefly<br>Silverleaf Whitefly<br>Sweetpotato<br>Whitefly                               |   | Apply with ground equipment in adequate water for uniform coverage (20 to 50 gal/A).  |
| Radish, Oriental<br>(Daikon)<br>Rutabaga                     |   |   | HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.   |
| Salsify Salsify, Black Salsify, Spanish Skirret Sweet Potato |   |   | 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).   |
| Tanier<br>Turmeric<br>Turnip                                 |   |   | Under severe pressure, use the higher recommended rates.  |
| Yam, Bean  |   |   | Only whole fields should be treated.  |
| Yam, True  | season.  Do not exceed 16 floyear.  Do not apply earlier treatment.  Regardless of formu per calendar year.  Do not plant any cro | an 2 <i>Knack</i> Insect oz of <i>Knack</i> Insect than 14 days afte lation do not app up other than thos | t Growth Regulator applications per growing of Growth Regulator per acre per calendar er last <i>Knack</i> Insect Growth Regulator oly more than 0.108 lb pyriproxyfen per acre se with registered pyriproxyfen uses in |
| *Not For Use in California.                                  | <ul> <li>Do not allow livestor</li> </ul>   |   | ter the last application.<br>ed areas.  |

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. LLC is restricting *Knack* Insect Growth Regulator to no more than 2 applications 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 Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

#### **STRAWBERRY**

**GENERAL:** Knack Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. Knack Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since Knack Insect Growth Regulator 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 Insect Growth Regulator exhibits translaminar movement which means that Knack Insect Growth Regulator 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.

| PESTS  | PRODUCT<br>RATE<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|--|-----------------------------|--|
| 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 gal/A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage. |
|  |                             | 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).                               |
|  |                             | Under severe pressure, use the higher recommended rates. Only whole fields should be treated.  |

- Do not apply within 2 days of harvest.
- Do not make more than 2 Knack Insect Growth Regulator applications per growing season.
- Do not exceed 20 fl oz *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 30 days after last Knack Insect Growth Regulator treatment.
- Regardless of formulation, do not apply more than 0.134 lb of pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

#### **WATERCRESS\***

**GENERAL**: *Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator 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 Insect Growth Regulator exhibits translaminar movement which means that Knack Insect Growth Regulator 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.

| PESTS                     | PRODUCT<br>RATES<br>PER ACRE | SPECIAL INSTRUCTIONS   |
|---------------------------|------------------------------|--|
| Sharpshooters<br>Whitefly | 8 to 10 fl oz                | Apply with ground equipment as a full coverage spray (10 to 50 gal/A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage. |
|                           |                              | Begin applications when whiteflies reach threshold levels per University/Extension recommendations.  |
| *Not For Use in           |                              | Under severe pressure, use the higher recommended rates.   |
| California.               |                              | Only whole fields should be treated.   |

Knack Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

- Do not apply within 7 days of harvest.
- Do not make more than 2 *Knack* Insect Growth Regulator applications per growing season.
- Do not exceed 20 fl oz *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 14 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation, do not apply more than 0.134 lb of pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

**MANAGING INSECT 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. LLC is restricting *Knack* Insect Growth Regulator to no more than 2 applications 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 IRM recommendations. Read and follow all product labels before applying any insecticide.

### STORAGE AND DISPOSAL

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

#### **PESTICIDE STORAGE**

Keep this product in its tightly closed original container. Store in a cool, dry (preferably locked) area that is inaccessible to children and animals.

For help with any spill, leak, fire or exposure involving this material, call day or night 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 HANDLING**

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available, or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Knack and Products That Work, From People Who Care are registered trademarks of Valent U.S.A. LLC.

Danitol is a registered trademark of Sumitomo Chemical Company, Ltd.

### Danitol is a restricted use product.

Manufactured for:

### Valent U.S.A. LLC

P.O. Box 8025 Walnut Creek CA 94596-8025 Made in U.S.A. Form 1277-R EPA Reg. No. 59639-95 EPA Est. 39578-TX-1

Information contained in this booklet is accurate at the time of printing. Since product testing is a continuous process, please read and follow the directions on the product label for the most current directions and precautionary statements.

Always check with your state to verify state registration status or call 800-6-VALENT (682-5368).



For state registration and/or supplemental labels, please call or visit us online.

Products That Work, From People Who Care® | valent.com | 800-6-VALENT (682-5368)

Always read and follow label instructions.

©2019 Valent U.S.A. LLC. All rights reserved. Printed in the U.S.A.