

### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

April 24, 2017

Ms. Julie B. Schlekau Manager, Label & States Group Registration and Regulatory Affairs Valent U.S.A. Corporation 1600 Riviera Avenue, Suite 200 Walnut Creek, CA 94596

Subject: Label Amendment – Correction of Various Calculations & Label Reformatting

Product Name: KNACK® Insect Growth Regulator

EPA Registration Number: 59639-95 Application Date: December 22, 2016

Decision Number: 525265

#### Dear Ms. Schlekau:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Page 2 of 2 EPA Reg. No. 59639-95 Decision No. 525265

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Mr. Carmen J. Rodia, Jr. by phone at (703) 306-0327, or via email at <u>Rodia.Carmen@epa.gov</u>.

Sincerely,

Richard Gebken Product Manager 10

Invertebrate & Vertebrate Branch 2

Registration Division (7505P)

Office of Pesticide Programs

Enclosure: Stamped "Accepted" Master & Supplemental Labels, dated April 24, 2017



GROUP 7C INSECTICIDE

[Bracketed information is optional text].

# KNACK® INSECT GROWTH REGULATOR

Active Ingredient	By Wt
*Pyriproxyfen	11.23%
Other Ingredients	<u>88.77%</u>
Total	100.00%

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

Contains 0.86 pound ai per gallon.

Contains aromatic petroleum distillates.

ACCEPTED

04/24/2017

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. FOCO OF

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 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:	<ul> <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>
If in eyes:	<ul> <li>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.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If swallowed:	<ul> <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>
If inhaled:	<ul> <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 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.

Note to EPA reviewer: if this product is shipped in containers greater than 50 lbs, the following environmental hazard statement will be added to the label:

[Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.]

#### **DIRECTIONS FOR USE**

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

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 PRODUCT 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 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. 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 FULLEST EXTENT ALLOWED BY LAW, 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

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.

[Optional Warranty/Disclaimer statement to be used when the product is sub-registered by Makhteshim Agan of North America, Inc.]

#### LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following **CONDITIONS**, **DISCLAIMER OF WARRANTIES** and **LIMITATIONS OF LIABILITY**.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Makhteshim Agan of North America, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Makhteshim Agan of North America, Inc.'s election, the replacement of 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 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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Artichoke Plum Moth Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl ozs	Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/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).  Under severe pressure, use the higher
		recommended rates.  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 ozs 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.

#### **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.

PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Whitefly	8 to 10 fl ozs	Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/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).
		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 ozs 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.

#### **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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	13 to 16 fl ozs	Apply with air or ground equipment in adequate water for uniform coverage: By air: 3 to 10 gals/A By ground: 10 to 50 gals/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).  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 ozs 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.

### 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. \*Not for use in California.

CROPS	PESTS	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
Bearberry Bilberry Blueberry, Lowbush Cloudberry Cranberry Lingonberry Muntries Partridgeberry Cultivars, varieties, and/or hybrids of these	Cherry Fruitworm Cranberry Fruitworm Lecanium Scale	16 fl ozs	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.  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 inseason 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.
	insecticides to comply Resistance Manageme  • Do not apply withi	with local Integrated ent (IRM) programs. n 7 days of harvest.	xed and/or alternated with commonly used Pest Management (IPM) and Insect
	growing season.		ct Growth Regulator applications per
	treatment.	·	last <i>Knack</i> Insect Growth Regulator  more than 0.215 lb pyriproxyfen per acre
	per calendar year		, more than 0.210 to pyriproxyrem per acre

### 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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Broccoli Broccoli Raab (rapini) Brussels Sprouts Cabbage Cauliflower Cavalo Broccolo Chinese Broccoli (gai lon) Chinese Cabbage (bok choy and napa) Chinese Mustard (gai choy) Collards Kale Kohlrabi Mizuna Mustard Greens Mustard Spinach Rape Greens Turnip Greens	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl ozs	Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/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).  Under severe pressure, use the higher recommended rates.  Only whole fields should be treated.
	<ul> <li>growing season.</li> <li>Do not exceed 20 fl oz calendar year.</li> <li>Do not apply earlier th Regulator treatment.</li> <li>Regardless of formula per acre per calendar</li> <li>Do not plant any crop in treated areas soone</li> </ul>	an 2 Knack Insect of Section 2 Knack Insect of Section 14 days after tion do not apply year.  other than those or than 30 days after section 2 days after than 2 days after than 2 days after than 2 days after than 3 days after th	Growth Regulator applications per Growth Regulator per acre per last <i>Knack</i> Insect Growth more than 0.134 lb pyriproxyfen with registered pyriproxyfen uses fter the last application.

### 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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Garlic Garlic, Great Headed Leek Onion, Dry Bulb Onion, Green Onion, Welsh Shallot	Onion Thrip Western Flower Thrip	8 fl ozs	FOR SUPPRESSION OF THRIPS: 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> <li>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.</li> <li>Do not apply within 3 days of harvest.</li> <li>Do not make more than 2 Knack Insect Growth Regulator applications per growing season.</li> <li>Do not exceed 16 fl ozs of Knack Insect Growth Regulator per acre per calendar year.</li> <li>Do not apply earlier than 14 days after last Knack Insect Growth Regulator treatment.</li> <li>Regardless of formulation do not apply more than 0.108 lb pyriproxyfen per acre per calendar year.</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>		

### 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. \*Not for use in California.

be slower than typical cont	act insecticides. "Not for t		I
CROPS	PESTS	PRODUCT RATE	SPECIAL INSTRUCTIONS
Aronia Berry Blueberry, Highbush Blueberry, Lowbush Buffalo Currant Chilean Guava Cranberry, Highbush Currant, Black Currant, Red Elderberry European Barberry Gooseberry Honeysuckle, Edible Huckleberry Jostaberry Juneberry (Saskatoon Berry) Lingonberry Native Currant Salal Sea Buckthorn Cultivars, varieties, and/or hybrids of these	Cherry Fruitworm Cranberry Fruitworm Lecanium Scale	PER ACRE 16 fl ozs	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.  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 inseason 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 inseason use and rates of oil in your area.
<ul> <li>Knack Insect Growth Regulator may be mixed and/or all commonly used insecticides to comply with local Integral Management (IPM) and Insect Resistance Management</li> <li>Do not apply within 7 days of harvest.</li> <li>Do not make more than 2 Knack Insect Growth Regulator growing season.</li> <li>Do not exceed 32 flozs of Knack Insect Growth Regulator growing season.</li> <li>Do not apply earlier than 14 days after last Knack In Regulator treatment.</li> <li>Regardless of formulation do not apply more than 0 per acre per calendar year.</li> </ul>		mixed and/or alternated with with local Integrated Pest ce Management (IRM) programs.  St. sect Growth Regulator applications per sect Growth Regulator per acre per ter last <i>Knack</i> Insect Growth	

### 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 typical contact insecticides. \*Not for use in California.

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CROPS	PESTS	PRODUCT RATE	SPECIAL INSTRUCTIONS	
CROPS	PESIS	PER ACRE	SPECIAL INSTRUCTIONS	
Blackberry including:	Cherry Fruitworm	16 fl ozs	Apply with ground or air equipment as a	
Bingleberry	Cranberry Fruitworm	10 11 025	full coverage spray (minimum of 5 gals/A	
Black Satin Berry	Lecanium Scale		by air or 50 gals/A by ground). Thorough	
Boysenberry	Lecament Scale		coverage is critical for adequate control. It	
Cherokee Blackberry			is essential to use adequate water volume	
Chesterberry			to ensure thorough coverage.	
Cheyenne Blackberry			le oneare thereagn coverage.	
Coryberry			Fruitworms: Apply when egg laying	
Darrowberry			begins and again at petal fall. Additional	
Dewberry			applications of another insecticide, at 10	
Dirksen Thornless Berry			to 14 day intervals, may be needed under	
Himalayaberry			high population pressure or sustained	
Hullberry			moth flight.	
Lavacaberry				
Lowberry			Lecanium Scale: Apply at either	
Lucretiaberry			dormant, delayed dormant or an in-	
Mammoth Blackberry			season cover spray. At dormant or	
Marionberry			delayed dormant use a spray oil at the	
Necterberry			manufacturer's recommended oil rate. In	
Olallieberry			a cover spray make applications when	
Oregon Evergreen berry			scale crawlers first emerge. Follow local	
Phenomenalberry			recommendations regarding in-season	
Rangerberry			use and rates of oil in your area.	
Ravenberry				
Rossberry				
Shawnee Blackberry				
Loganberry				
Raspberry, including:				
Bababerry				
Black raspberry	16 11 10 11			
Blackcap			mixed and/or alternated with commonly	
Caneberry Framboise			egrated Pest Management (IPM) and Insect	
Framboise	Resistance Manageme	ent (IRM) programs	S.	
Himbeere	Daniel I 1911	- 7 days (1		
Keriberry		n 7 days of harvest		
Mayberry		e than 2 <i>Knack</i> Ins	sect Growth Regulator applications per	
Red raspberry	growing season.			
Thimbleberry		tl ozs of Knack In:	sect Growth Regulator per acre per	
Tulameen	calendar year.			
Yellow raspberry	Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator			
Wild raspberry	treatment.			
Youngberry	<u> </u>		oly more than 0.215 lb pyriproxyfen per acre	
Cultivars, varieties, and/or	per calendar year			
hybrids of these				
	TANCE. Description	( ()	loss of inaccticides with similar modes of	

### CITRUS FRUIT (Crop Group 10-10)

**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* 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
Australian Desert Lime Australian Finger-lime Australian Round Lime Brown River Finger Lime Calamondin Citron Citrus hybrids Grapefruit Japanese Summer Grapefruit Kumquat Lemon Lime Mediterranean Mandarin Mount White Lime New Guinea Wild Lime Orange, Sour Orange, Sweet Pummelo Russell River Lime Satsuma Mandarin Sweet Lime	Black Scale Brown Soft Scale California Red Scale Florida Red Scale Snow Scale	16 fl ozs	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.  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.  Knack Insect Growth Regulator may be applied with superior spray oils at 1/2 to 1%. Follow the manufacturer's directions and recommendations on timing and rates.  NOTE: For scale apply during emergence of scale crawlers, do not apply more than 16 fl ozs of Knack Insect Growth Regulator per acre per year.
Tachibana Orange Tahiti Lime Tangelo Tangerine (mandarin) Tangor Trifoliate Orange Uniq Fruit Cultivars, varieties, and/or hybrids of these	Citrus Black Fly Citrus Leafminer Citrus Whitefly	10 fl ozs	Apply with ground application 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.  Apply when pests are just beginning to build and before infestation has occurred. Thorough coverage is essential for good control.  NOTE: Do not make more than 2 applications of <i>Knack</i> Insect Growth Regulator per acre per year.

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 exceed 26 fl ozs of Knack Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 21 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.175 lb pyriproxyfen per acre per calendar year.

#### 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 RATE PER ACRE	SPECIAL INSTRUCTIONS
Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly	8 to 10 fl ozs	Apply with air or ground equipment in adequate water for uniform coverage:
Sweetpotato Whitefly	Do not apply less than 8 fl ozs/A	By Air: 3 to 10 gals/A By Ground: 10 to 50 gals/A
		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 ozs *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.

### 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 RATES 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 Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl ozs  Do not apply less than 8 fl ozs/A	Apply with air or ground equipment in adequate water for uniform coverage: By air: 3 to 10 gals/A By Ground: 10 to 50 gals/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.
	growing season.  Do not exceed 20 fl o year.  Do not apply earlier th treatment.  Regardless of formula per calendar year.  Do not plant any crop	an 2 <i>Knack</i> Insect Growth zs <i>Knack</i> Insect Growth nan 14 days after last <i>Kn</i> ation do not apply more	th Regulator applications per Regulator per acre per calendar mack Insect Growth Regulator than 0.134 lb pyriproxyfen per acre egistered pyriproxyfen uses in st application.

### 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 RATES 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 Pepino Pepper, Bell Pepper, Nonbell Roselle Scarlet Eggplant	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl ozs  Do not apply less than 8 fl ozs/A of <i>Knack</i> Insect Growth Regulator when used as a stand alone application.	Apply with air or ground equipment in adequate water for uniform coverage:  By Air:
			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.
Sunberry Tomatillo Tomato Tree Tomato Cultivars, varieties, and/or hybrids of these	Banded Wing Whitefly Cabbage Looper Green Peach Aphid Greenhouse Whitefly (immatures & adults) Silverleaf Whitefly Sweetpotato Whitefly Tobacco Hornworm	6 to 8 fl ozs	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.  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
	<ul> <li>insecticides to comply with Resistance Management (a)</li> <li>Do not apply within 1</li> <li>Do not make more the season.</li> <li>Do not exceed 16 floor on the season of the season.</li> <li>Do not apply earlier the treatment.</li> <li>Regardless of formula calendar year.</li> <li>Do not plant any crop</li> </ul>	n local Integrated Pest Mana (IRM) programs.  day of harvest. nan 2 <i>Knack</i> Insect Growth DZS <i>Knack</i> Insect Growth Rothan 14 days after last <i>Knack</i>	mix partner label. alternated with commonly used agement (IPM) and Insect  Regulator applications per growing egulator per acre per calendar year. ck Insect Growth Regulator an 0.108 lb pyriproxyfen per acre per stered pyriproxyfen uses in treated

continued

FRUITING VEGETABLES (Crop Group 8-10) - continued

CROP	PESTS	PRODUCT RATES 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 ozs  +  Danitol® 2.4 EC Spray 10-2/3 fl ozs	EARLY SEASON WHITEFLY CONTROL PROGRAM FOR REDUCTION OF GEMINIVIRUS: 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. 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 gals/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.
	<ul> <li>insecticides to comply with Management (IRM) progra</li> <li>Do not apply within 1</li> <li>Do not make more the Do not exceed 16 floor Do not apply earlier to Regardless of formuly year.</li> <li>Do not plant any crop</li> </ul>	a local Integrated Pest Marams.  4 days of harvest.  1 days of harvest.  2 Knack Insect Growth  2 Knack Insect Growth R  3 than 14 days after last Kna  4 ation do not apply more th	d/or alternated with commonly used nagement (IPM) and Insect Resistance  Regulator applications per growing season. Regulator per acre per calendar year. Insect Growth Regulator treatment. In an 0.108 lb pyriproxyfen per acre per calendar istered pyriproxyfen uses in treated areas

#### 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 insects' development, evidence of activity will be slower than typical contact insecticides.

PESTS	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
Glassy-Winged Sharpshooter Grape Berry Moth Lecanium Scale	16 fl ozs	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.  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 ozs 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 active of pyriproxyfen per acre per calendar year.

### HERB (Subgroup 19A)

**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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Angelica Balm Basil Borage Burnet Chamomile Catnip Chervil (dried) Chive Chive, Chinese Clary Coriander (leaf) Costmary Cilantro (leaf) Curry (leaf) Dillweed Horehound Hyssop Lavender Lemongrass Lovage (leaf) Marigold Marjoram Nasturtium Parsley (dried) Pennyroyal	Whiteflies, including: Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl ozs	Apply with ground equipment in adequate water for uniform coverage. A minimum of 20 gallons per acre for ground applications  HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.  Begin applications when whiteflies reach threshold levels. Under severe pressure, use the higher recommended rates.  Treat only whole fields.
Rosemary Rue Sage Savory, Summer and Winter Sweet Bay Tansy Tarragon Thyme Wintergreen Woodruff Wormwood	growing season.  Do not exceed 20 fl oz year.  Do not apply earlier th treatment.  Regardless of formula calendar year.  Do not plant any crop	an 2 Knack Insect Growth as of Knack Insect Growth an 14 days after last Knation do not exceed 0.134 other than those with reg	Regulator applications per  Regulator per acre per calendar  ck Insect Growth Regulator  Ib pyriproxyfen per acre per  istered Knack Insect Growth days after the last application.

### 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.

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CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Amaranth (Chinese Spinach) Arugula (Roquette) Cardoon Celery Celery, Chinese Celtuce Chervil Chrysanthemum, Edible-leaved Chrysanthemum, Garland Corn Salad Cress, Garden Cress, Upland Dandelion, Dock (Sorrel) Endive (Escarole) Fennel, Florence Lettuce, Head and Leaf Orach Parsley	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl ozs	Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/A).  HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.  Begin applications when whiteflies reach threshold levels per University/Extension recommendations  Under severe pressure, use the higher recommended rates.  Only whole fields should be treated.
Purslane, Winter Radicchio (Red Chicory) Rhubarb Spinach New Zealand Spinach Vine Spinach Swiss Chard	<ul> <li>Do not make more applications per gr</li> <li>Do not exceed 20 per calendar year.</li> <li>Do not apply earlie Regulator treatmed Regardless of form pyriproxyfen per are Do not plant any control</li> </ul>	rowing season.  fl ozs <i>Knack</i> Insector than 14 days after than 14 days after than 14 days after than those than the than those than the	ect Growth Regulator  ct Growth Regulator per acre  er last <i>Knack</i> Insect Growth  ly more than 0.134 lb

### 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.

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CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Beet, Garden Burdock, Edible Carrot Cassava, Bitter	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl ozs	Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/A).
Cassava, Sweet Celeriac Chervil, Turnip-Rooted Chicory			HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.
Dasheen (Taro) Parsnip Radish Radish, Oriental (daikon) Rutabaga Salsify, Black			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).
Sugar Beet Sweet Potato Tanier			Under severe pressure, use the higher recommended rates.
Turnip			Only whole fields should be treated.
Yam, True	Do not make more growing season.		Growth Regulator applications per rowth Regulator per acre per calendar
	<ul> <li>Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment.</li> <li>Regardless of formulation do not apply more than 0.107 lb pyriproxyfen per acre per calendar year.</li> </ul>		
		rop other than those v 30 days after the last	with registered pyriproxyfen uses in treated tapplication.
	<ul> <li>Do not allow livest</li> </ul>	ock to graze on treate	ed areas.

### 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.

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CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Beans (Lupinus): Grain Lupin Sweet Lupin White Lupin White Sweet Lupin Beans (Phaseolus): Field Bean	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl ozs	EARLY SEASON WHITEFLY PROGRAM: 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.
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 Wax Bean Rean (Vigna):			Under severe pressure, use the higher recommended rates.
Bean (Vigna): Adzuki Bean Asparagus Bean Blackeyed Pea Catjang Chinese Longbean Cowpea Crowder Pea Moth Bean Mung Bean Rice Bean Southern Pea Urd Bean Yardlong Bean Broad Bean (fava) Chickpea (garbanzo) Guar Jackbean Lablab Bean			Only whole fields should be treated.
Lentil Pea (Pisum): Dwarf Pea Edible-podded Pea English Pea	<ul> <li>Do not apply within 7</li> <li>Do not make more the</li> </ul>	nan 2 Knack Insect Growth Re	gulator applications per growing season.
Field Pea Garden Pea Green Pea Snowpea Sugar Snap Pea Pigeon Pea	<ul> <li>Do not exceed 20 fl ozs of <i>Knack</i> Insect Growth Regulator per acre per calendar year.</li> <li>Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment.</li> <li>Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per calendar year.</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>		
Soybean[1] Sword Bean	<ul> <li>Do not allow livestock to graze treated areas.</li> <li>Do not use on legume vegetables varieties grown for livestock feed.</li> </ul>		

#### **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 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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Black Scale San Jose Scale	13 to 16 fl ozs	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.  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.
		Under heavy scale pressure, use the higher rate of <i>Knack</i> Insect Growth Regulator.

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 ozs 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.

#### PASTURE GRASS AND RANGELAND

**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.

PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Cricket	8 to 10 fl ozs	Apply with air or ground equipment in adequate water for
Grasshopper		uniform coverage:
Locust		By air3 to 10 gals/A
		By Ground10 to 50 gals/A
		HIGHER WATER VOLUMES PROVIDE IMPROVED INSECT CONTROL.
		Begin application when pests reach threshold levels per University/Extension recommendations.
		Under severe pressure, use the higher recommended rates.

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 make more than 2 Knack Insect Growth Regulator applications per growing season.
- Do not exceed 20 fl ozs *Knack* Insect Growth Regulator per acre per calendar year.
- Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per calendar year.
- Do not apply earlier than 14 days after last Knack Insect Growth Regulator treatment.

#### **PAWPAW**

**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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Scale Whitefly	13 to 16 fl ozs	Apply 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.
		<b>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. Do not use oil in an in-season spray.
		In a cover spray make applications when scale crawlers first emerge.
		Under heavy scale pressure, use the higher rate of <i>Knack</i> Insect Growth Regulator.

In-season sprays of *Knack* Insect Growth Regulator may not protect fruit from blemishes by scale.

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 3 Knack Insect Growth Regulator applications per growing season.
- Do not exceed 48 fl ozs 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 0.323 lb pyriproxyfen per acre per calendar year.

#### **PINEAPPLE**

**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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Black Scale Brown Soft Scale California Red Scale Florida Red Scale Snow Scale	16 fl ozs	Apply with ground equipment in 20 to 50 gals/A. Apply in sufficient water volume for plant size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.  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.  Knack Insect Growth Regulator may be applied with superior spray oils at 1/2 to 1%. Follow the manufacturer's directions and recommendations on timing and rates.

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 calendar year.
- Do not exceed 32 fl ozs of *Knack* Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 21 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.

### POME FRUIT (Crop Group 11-10)

**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.

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Apple Azarole Crabapple Loquat Mayhaw Medlar Quince Quince,Chinese Quince, Japanese Tejocote Cultivars, varieties, and/or hybrids of these	Codling Moth  Suppression of: Obliquebanded Leafroller	13 to 16 fl ozs	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
	Pandemis Leafroller		1st Generation Codling Moth: 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 <i>Knack</i> Insect Growth Regulator. Follow local recommendations regarding in season use and rates of oil in your area.
			Obliquebanded and Pandemis Leafroller: Apply to the overwintering larvae at the pink to petal fall tree growth stage. Knack Insect Growth Regulator does not directly control the larvae but inhibits normal pupation and adult emergence.
	Florida Red Scale Lecanium Scale San Jose Scale	13 to 16 fl ozs	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.
			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 Insect Growth Regulator.
			Scale: 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.

continued

POME FRUIT (Crop Group 11-10) - continued

POME FRUIT (Crop Group 11-10) - continued PRODUCT					
CROPS	PESTS	RATES PER ACRE	SPECIAL INSTRUCTIONS		
Apple Azarole Crabapple Loquat Mayhaw Medlar Quince Quince, Chinese Quince, Japanese Tejocote Cultivars, varieties, and/or hybrids of these	Green Apple Aphid Rosy Apple Aphid Spirea Aphid Spotted Tentiform Leafminer Western Tentiform Leafminer	10 to 16 fl ozs	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  Leafminers: Apply at peak moth flight for control of 1st or 2nd generation. This usually occurs at pre-pink to pink apple stage for 1st generation and 2nd cover for 2nd generation.  Rosy Apple Aphid: Apply at 1/2" green apple growth stage.  Green Apple & Spirea Aphid: Apply when aphids first appear, but before aphids are colonized.		
Pear Pear, Asian	Pear Psylla	13 to 16 fl ozs	APHID CONTROL.  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.  Apply a single application during the delayed dormant to pink stage of growth at 16 fl ozs/A or make two applications from delayed dormant through petal fall stage of growth at 13 to 16 fl ozs/A. Make application just before sustained egg lay is anticipated.  DO NOT SKIP ROWS DURING APPLICATION.  For in-season control of pear psylla, use an insecticide recommended for this use.		
	Lecanium Scale San Jose Scale	13 to 16 fl ozs	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.  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.  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.		

continued

POME FRUIT (Crop Group 11-10) - continued

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Pear Pear, Asian	Codling Moth  Suppression of: Obliquebanded Leafroller Pandemis Leafroller	13 to 16 fl ozs	Apply by ground with airblast equipment in 100 to 400 gals/A.  1st Generation Codling Moth: 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 Insect Growth Regulator. Follow local recommendations regarding in-season use and rates of oil in your area.
	For additional generations apply other insecticides registered for Codling Moth Control.  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 45 days of harvest.  Do not make more than 2 Knack Insect Growth Regulator applications per growing season.  Do not exceed 32 fl ozs 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.		

#### **POMEGRANATE**

**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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	13 to 16 fl ozs	Apply with air or ground equipment in adequate water for uniform coverage: By air: 3 to 10 gals/A By ground: 10 to 50 gals/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).  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 ozs 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 0.323 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.

## 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 RATES	SPECIAL INSTRUCTIONS
Arracacha Arrowroot Artichoke, Chinese Artichoke, Jerusalem Beet, Garden Beet, Sugar Burdock, Edible Canna, Edible Carrot Cassava, (bitter and sweet) Celeriac Chaoyote (root) Chervil, Turnip-rooted Chicory Chufa Dasheen (taro) Ginger Ginseng Horseradish Leren Parsley, Turnip-rooted Parsnip Potato	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 fl ozs	Apply with ground equipment in adequate water for uniform coverage (20 to 50 gals/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).  Under severe pressure, use the higher recommended rates.  Only whole fields should be treated.
Radish Radish, Oriental (dai kon) Rutabaga Salsify Salsify, Black Salsify, Spanish Skirret Sweet Potato Tanier Turmeric Turnip Yam, Bean Yam, True	<ul> <li>Do not apply within 7 days of harvest.</li> <li>Do not make more than 2 <i>Knack</i> Insect Growth Regulator applications per growing season.</li> <li>Do not exceed 16 fl ozs of <i>Knack</i> Insect Growth Regulator per acre per calendar year.</li> <li>Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment.</li> <li>Regardless of formulation do not apply more than 0.108 lb pyriproxyfen per acre per calendar year.</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>Do not allow livestock to graze treated areas.</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 no more than two 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 ozs 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.

# SMALL FRUIT VINE CLIMBING CROPS (EXCEPT GRAPE) (Subgroup 13-07E)

**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 RATE PER ACRE	SPECIAL INSTRUCTIONS
Berry, Schisandra Gooseberry Grape, Amur River Kiwifruit, Fuzzy Kiwifruit, Hardy Maypop Cultivars, varieties and/or	Scale	16 fl ozs	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.
hybrids of these.	Apply at eith in-season of dormant us recommend applications Follow loca	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 inseason use and rates of oil in your area.	
	Do not growing     Do not calenda     Do not Regular	Knack Insect Growth Regulator may be mixed and/or alternated commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) properties to not apply within 30 days of harvest.  Do not make more than 2 Knack Insect Growth Regulator applits growing season.  Do not exceed 32 flozs of Knack Insect Growth Regulator 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 pyrit per acre per calendar year.	

**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 no more than two 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. Follow local, state and federal IPM and IRM recommendations. Read and follow all product labels before applying any insecticide.

## STONE FRUIT (Crop Group 12)

**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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Apricot Cherry Chickasaw Plum Damson Plum Fresh Prune Japanese Plum Nectarine Peach Plum Plumcot Prune	Lecanium Scale San Jose Scale  Suppression of: Peach Twig Borer Oriental Fruit Moth	13 to 16 fl ozs	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.  Scale: 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.  Under heavy scale pressure, use the higher rate of Knack Insect Growth Regulator.  Peach Twig Borer: Knack Insect Growth Regulator 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
	In-season sprays of Knad scale.	ck Insect Growth Regula	for the stage of crop growth. ator may not protect fruit from blemishes by
		th local Integrated Pest	nd/or alternated with commonly used Management IPM and Insect Resistance
	season.  Do not exceed 48 fl c  Do not apply earlier the	an 3 <i>Knack</i> Insect Grown ozs of <i>Knack</i> Insect Grown han 14 days after last <i>K</i>	with Regulator applications per growing with Regulator per acre per calendar year.  with Regulator per acre per calendar year.  with Regulator treatment.  with Regulator treatment.  with Regulator treatment.  with Regulator treatment.  with Regulator per acre per

**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 no more than three 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. 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 insects' 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 RATE PER ACRE	SPECIAL INSTRUCTIONS
Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	10 fl ozs	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.  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 ozs *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.

**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 no more than two 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. 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.

# TREE NUTS (Crop Group 14)

**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.

CROP	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Almond	Black Scale San Jose Scale Suppression of: Peach Twig Borer	13 to 16 fl ozs	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.  Apply at either dormant, delayed dormant or an inseason 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 inseason use and rates of oil in your area.  Knack Insect Growth Regulator has provided good suppression of Peach Twig Borer when applied delayed dormant through bloom sprays.
	<ul> <li>Almond:</li> <li>Do not apply within 21 days of harvest.</li> <li>Do not make more than 1 <i>Knack</i> Insect Growth Regulator application per growing season.</li> <li>Do not exceed 16 fl ozs of <i>Knack</i> Insect Growth Regulator per acre per calendar year.</li> <li>Regardless of formulation do not apply more than 0.108 lb pyriproxyfen per acre per calendar year.</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 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. 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.

continued

TREE NUTS (Crop Group 14) - continued

, ,	Group 14) - continue	PRODUCT	
CROPS	PESTS	RATES PER	SPECIAL INSTRUCTIONS
Beechnut Brazil Butternut Cashew Chestnut Chinquapin Filbert (Hazelnut) Hickory Macadamia Pecan Pistachio Walnut	Codling Moth Dusky Veined Aphid Walnut Aphid	ACRE 16 fl ozs	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.  1st Generation Codling Moth: 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 <i>Knack</i> Insect Growth Regulator. Follow local recommendations regarding in-season use
	Black Scale Brown Soft Scale Italian Scale Lecanium Scale San Jose Scale Walnut Scale Suppression of: Peach Twig Borer	13 to 16 fl ozs	and rates of oil in your area.  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.  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.  Under heavy scale pressure, use the higher rate.  Coverage is essential for good control. Apply in sufficient water volume for tree size. Use of higher water volume will assure better
	<ul> <li>insecticides to comply Resistance Manageme</li> <li>Do not apply within</li> <li>Do not make more season.</li> <li>Do not exceed 32 year.</li> <li>Do not apply earlie</li> </ul>	with local Integrate ent (IRM) programs on 21 days of harves than 2 Knack Insert than 14 days after than 14 days after	

**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 no more than two 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. Follow local, state and federal IPM and 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* 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	PEST	PRODUCT RATE	SPECIAL INSTRUCTIONS
Acerola Atemoya Avocado Biriba Black Sapote Canistel Cherimoya Custard Apple Feijoa Guava Ilama Jaboticaba Longan Lychee Mamey Sapote Mango Passionfruit	Scale	PER ACRE 16 fl ozs	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.  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.
Papaya Pulasan Rambutan Sapodilla		vith local Integrate	or may be mixed and/or alternated with commonly used insecticides ed Pest Management (IPM) and Insect Resistance Management
Soursop Spanish Lime Star Apple Starfruit Sugar Apple Wax Jambu	<ul><li>Do not</li><li>Do not</li><li>Do not</li><li>Regar</li></ul>	t exceed 32 fl ozs t apply earlier thar	lays of harvest.  2 Knack Insect Growth Regulator applications per growing season. of Knack Insect Growth Regulator per acre per calendar year. in 14 days after last Knack Insect Growth Regulator treatment. ion do not apply more than 0.215 lb pyriproxyfen per acre per

**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 no more than two 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. Follow local, state and federal IPM and IRM recommendations. Read and follow all product labels before applying any insecticide.

#### **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 insects' 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 RATE PER ACRE	SPECIAL INSTRUCTIONS
Sharpshooters Whitefly	8 to 10 fl ozs	Apply with ground equipment as a full coverage spray (10 to 50 gals/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  Under severe pressure, use the higher recommended rates.  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 ozs 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. Corporation is restricting *Knack* Insect Growth Regulator to no more than two 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 ozs 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.

#### 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* 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 RATES PER ACRE	SPECIAL INSTRUCTIONS
Black Scale Brown Soft Scale California Red Scale Florida Red Scale Snow Scale	16 fl ozs	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.
Show scale		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.
		Knack Insect Growth Regulator may be applied with superior spray oils at 1/2 to 1%. Follow the manufacturer's directions and recommendations on timing and rates.
		NOTE: For scale apply during emergence of scale crawlers, do not apply more than 16 fl ozs of <i>Knack</i> Insect Growth Regulator per acre per year.
Citrus Black Fly Citrus Leafminer Citrus Whitefly	10 fl ozs	Apply with ground application 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.
		Apply when pests are just beginning to build and before infestation has occurred. Thorough coverage is essential for good control.
		NOTE: Do not make more than 2 application of <i>Knack</i> Insect Growth Regulator per acre per year.

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 exceed 26 fl ozs of Knack Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 21 days after last Knack Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.175 lb pyriproxyfen per acre per calendar year.

**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 no more than two 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. 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.

#### 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**

[Use the following statement for containers smaller than 50 lbs]

[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.]

[Use the following statements for containers greater than 50 lbs]

[Nonrefillable container. Do not reuse or refill this container. Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. 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.]

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*Knack* is a registered trademark 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 www.valent.com

Made in U.S.A.

EPA Reg. No. 59639-95 EPA Est.

059639-00095.20170424.KNK.AMEND

### **Supplemental Label**



### KNACK<sup>®</sup> INSECT GROWTH REGULATOR EPA Reg. No. 59639-95

### KNACK® INSECT GROWTH REGULATOR FOR USE ON CITRUS FRUIT

This supplemental label expires April 24, 2020 and must not be used or distributed after this date.

#### **DIRECTIONS FOR USE**

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

THIS LABELING MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF APPLICATION. READ THE LABEL AFFIXED TO THE CONTAINER FOR KNACK INSECT GROWTH REGULATOR BEFORE APPLYING. USE OF KNACK INSECT GROWTH REGULATOR ACCORDING TO THIS LABELING IS SUBJECT TO THE USE PRECAUTIONS AND LIMITATIONS IMPOSED BY THE LABEL AFFIXED TO THE CONTAINER FOR KNACK INSECT GROWTH REGULATOR.

### **CITRUS FRUIT (Crop Group 10-10)**

Australian Desert Lime; Australian Finger-lime; Australian Round Lime; Brown River Finger Lime; Calamondin; Citron; Citrus hybrids; Grapefruit; Japanese Summer Grapefruit; Kumquat; Lemon; Lime; Mediterranean Mandarin; Mount White Lime; New Guinea Wild Lime; Orange, Sour; Orange, Sweet; Pummelo; Russell River Lime; Satsuma Mandarin; Sweet Lime; Tachibana Orange; Tahiti Lime; Tangelo; Tangerine (mandarin); Tangor; Trifoliate Orange; Uniq Fruit; cultivars, varieties, and/or hybrids of these.

**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.

**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 no more than two 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. Follow local, state, and federal IPM and IRM recommendations. Read and follow all product labels before applying any insecticide.

ACCEPTED

04/24/2017

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the

and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 50000 05

CITRUS FRUIT (Crop Group 10-10) continued

PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Black Scale Brown Soft Scale California Red Scale Florida Red Scale Snow Scale	16 fl ozs	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.
		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.
		Knack Insect Growth Regulator may be applied with superior spray oils at 1/2 to 1%. Follow the manufacturer's directions and recommendations on timing and rates.
		NOTE: For scale apply during emergence of scale crawlers, do not apply more than 16 fl ozs of <i>Knack</i> Insect Growth Regulator per acre per calendar year.
Citrus Black Fly Citrus Leafminer Citrus Whitefly	10 fl ozs	Apply with ground application 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.
		Apply when pests are just beginning to build and before infestation has occurred. Thorough coverage is essential for good control.
		NOTE: Do not make more than 2 applications of Knack Insect Growth Regulator per acre per year.

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 exceed 26 fl ozs of Knack Insect Growth Regulator per acre per calendar year.
- Do not apply earlier than 21 days after last *Knack* Insect Growth Regulator treatment.
- Regardless of formulation do not apply more than 0.175 lb pyriproxyfen per acre per calendar year.

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

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Walnut Creek, CA 94596-8025

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