

59639-95

07/16/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

JUL 16 2012

Dr Robert Hamilton
Senior Regulatory Scientist
Registration and Regulatory Affairs
Valent U S A Corporation
1101 14th Street NW Suite 1050
Washington DC 20005

Subject Label Notification per PR Notice 98 10
Knack Insect Growth Regulator
EPA Reg No 59639 95

Dear Dr Hamilton

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98 10 dated April 11 2012 for the product Knack Insect Growth Regulator EPA Reg No 59639 95 The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98 10 and finds that the action(s) requested fall within the scope of PRN 98 10 The label submitted with the application has (have) been stamped Notification and will be placed in our records

If you have any questions please call Kevin Sweeney at (703) 305 5063

Sincerely

Richard Gebken
Product Manager 10
Registration Division (7505P)
Office of Pesticide Programs

Enclosure



United States
Environmental Protection Agency
Washington DC 20460

Registration
 Amendment
 Other

OPP Identifier Number

Application for Pesticide - Section I

1 Company/Product Number 59639 95	2 EPA Product Manager Mr Richard Gebkin	3 Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4 Company/Product (Name) Knack Insect Growth Regulator	PM# 10	
5 Name and Address of Applicant (Include ZIP Code) Valent U S A Corporation 1600 Riviera Ave Suite 200 Walnut Creek CA 94596 <input type="checkbox"/> Check if this is a new address	6 Expedited Review In accordance with FIFRA Section 3(c)(3) (b)(i) my product is similar or identical in composition and labeling to <input checked="" type="checkbox"/> EPA Reg No _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment Explain below	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> Me Too Application
<input checked="" type="checkbox"/> Notification Explain below	<input type="checkbox"/> Other Explain below

NOTIFICATION

JUL 16 2012

Explanation Use additional page(s) if necessary (For section I and Section II)

Notification to add alternate limitation of liability/warranty statement to accommodate supplemental distributors

Section III

1 Material This Product Will Be Packaged In				2 Type of Container	
Child Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____		
* Certification must be submitted		If Yes Unit Packaging wgt	No per container	If Yes Package wgt	No per container
3 Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4 Size(s) Retail Container		5 Location of Label Directions <input type="checkbox"/> On Label <input checked="" type="checkbox"/> On Labeling accompanying product	
6 Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

Section - IV

1 Contact Point (Complete items directly below for identification of individual to be contacted if necessary to process this application)		
Name Robert L Hamilton	Title Sr Regulatory Scientist	Telephone No (Include Area Code) (202) 872 4682
Certification I certify that the statements I have made on this form and all attachments thereto are true accurate and complete I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law		6 Date Application Received (Stamped)
2 Signature <i>Senda Olvestad</i>	3 Title Sr Regulatory Scientist	
4 Typed Name Robert L Hamilton	5 Date April 11 2012	

Valent U S A Corporation
Registration & Regulatory Affairs
1101 14th St NW suite 1050
Washington DC 20005
(202) 872 4688



April 11 2012

NOTIFICATION
Knack Insect Growth Regulator (59639 95)
Esteem 35 WP Insect Growth Regulator (59639 115)
Distance Insect Growth Regulator (59639 96)

Mr Richard J Gebken PM 10
Document Processing Desk (NOTIF)
Office of Pesticide Programs
US Environmental Protection Agency (7504P)
Room S 4900 One Potomac Yard
2777 S Crystal Drive
Arlington VA 22202

ATTENTION Mr Kevin Sweeney

Dear Mr Gebken

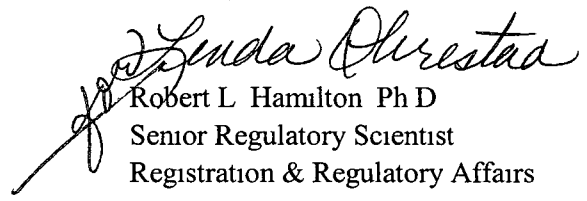
Valent U S A is submitting the enclosed notification to add an alternate Limitation of Warranty and Liability statement on our Knack Esteem 35 WP and Distance Insect Growth Regulator products to accommodate supplemental distributor labeling The resistance management group classification number on the Distance label changed from 7D to 7C to be consistent with other pyriproxyfen product labels

Please find enclosed the following supporting documents for this notification

- 1 Application for registration (EPA Form 8570 1)
- 2 One (1) redline copy of the proposed changes
- 3 One (1) clean copy of the proposed product labeling
- 4 One CD containing a copy of the proposed labels in PDF format
- 5 Certification with Respect to Label Integrity Statement

If you have questions please contact me in the Washington DC Office at (202) 872 4682 or by email robert.hamilton@valent.com

Sincerely yours


 Robert L Hamilton Ph D
 Senior Regulatory Scientist
 Registration & Regulatory Affairs

Enclosures



GROUP 7C INSECTICIDE

[Bracketed information is optional text]

NOTIFICATION

JUL 16 2012

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

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS 1 GALLON

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

CAUTION

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

FIRST AID	
If on skin or clothing	Take off contaminated clothing Rinse skin immediately with plenty of water for 15 20 minutes Call a poison control center or doctor for further treatment advice
If in eyes	Hold eye open and rinse slowly and gently with water for 15 20 minutes Remove contact lenses if present after the first 5 minutes then continue rinsing eye Call a poison control center or doctor for treatment advice
If swallowed	Immediately call a poison control center or doctor Do not induce vomiting unless told to do so by a poison control center or doctor Do not give any liquid to the person Do not give anything by mouth to an unconscious person
If inhaled	Move person to fresh air If person is not breathing call 911 or an ambulance then give artificial respiration preferably by mouth to mouth if possible Call a poison control center or doctor for further treatment advice
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment You may also contact 1 800 892 0099 for emergency medical treatment information	
NOTE TO PHYSICIANS	
If ingested probable mucosal damage may contraindicate the use of gastric lavage This product contains a light hydrocarbon liquid ingestion or subsequent vomiting can result in aspiration of this product which can cause pneumonitis	

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

Applicators and other handlers must wear coveralls over short-sleeved shirt and short pants or long sleeved shirt and long pants chemical resistant gloves such as Barrier Laminate or Viton ≥ 14 mils chemical resistant footwear plus socks chemical resistant headgear for overhead exposure chemical resistant apron when cleaning equipment mixing or loading

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate Do not reuse them Follow manufacturer s instructions for cleaning/maintaining PPE If no such instructions for washables use detergent and hot water Keep and wash PPE separately from other laundry

USER SAFETY RECOMMENDATIONS

Users should

- Wash hands before eating drinking chewing gum using tobacco or using the toilet
- Remove clothing immediately if pesticide gets inside Then wash thoroughly and put on clean clothing
- Remove PPE immediately after handling this product Wash the outside of gloves before removing As soon as possible wash thoroughly and change into clean clothing

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas Do not contaminate water by disposing of equipment washwaters or rinsate Avoid direct application and/or spray drift to bee hives

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 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil, or water is: coveralls over short-sleeved shirt and short pants; chemical-resistant gloves such as Barrier Laminate or Viton \geq 14 mils; chemical-resistant footwear plus socks; chemical-resistant headgear for overhead exposure.

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

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

RISKS OF USING THIS PRODUCT

The Buyer and User (referred to collectively herein as Buyer) of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include but are not limited to injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application (or a combination of such factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND 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 is a Group 7C insecticide. Any insect population may contain individuals naturally resistant to KNACK 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 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

11/47

GENERAL INFORMATION

Do not apply this product through any type of irrigation system

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

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

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

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

CROP	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Artichoke Globe	Artichoke Plum Moth Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz	<p>Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/A)</p> <p>HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL</p> <p>Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures)</p> <p>Under severe pressure use the higher recommended rates</p> <p>Only whole fields should be treated</p>
<p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs</p> <p>Do not apply within 7 days of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 20 fl oz of KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application Do not apply this product with an adjuvant</p>			

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

ASPARAGUS

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

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

CROP	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Asparagus	Whitefly	8 to 10 fl oz	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 style="list-style-type: none"> Do not apply within 7 days of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 20 fl oz of KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application Do not apply this product with an adjuvant 			

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

BANANA AND PLANTAIN

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

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

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Banana Plantain	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	13 to 16 fl oz	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
<p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs</p> <ul style="list-style-type: none"> Do not apply within 14 days of harvest Do not make more than 3 KNACK applications per growing season • Do not exceed 48 fl oz of KNACK per acre per season • Regardless of formulation do not apply more than 0.327 lb pyriproxyfen per acre per season Do not apply earlier than 14 days after last KNACK treatment • Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application 			

MANAGING WHITEFLY RESISTANCE Repeated use of the same class of insecticides or insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to three applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 13 fl oz per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal IPM and IRM recommendations. Read and follow all product labels before applying any insecticide.

BERRIES

(Crop Group 13) [not all berries for use in CA]

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

CROPS	PESTS	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
Berries Bingleberry ¹ Blackberry including ¹ Bingleberry Black Satin Berry Boysenberry Cherokee Blackberry Chesterberry Cheyenne Blackberry Coryberry Darrowberry Dewberry Dirksen thornless berry Himalayaberry Hullberry Lavacaberry Lowberry Lucretiaberry Mammoth Blackberry Marionberry Nectorberry Ollaliberry Oregon Evergreen Berry Phenomenalberry Rangeberry Ravenberry Rossberry Shawnee Blackberry Youngberry Blueberry Currant Elderberry Gooseberry Huckleberry Juneberry Lingonberry Loganberry ¹ Raspberry (black and red) ¹ Salal	Cherry Fruitworm Cranberry Fruitworm Lecanium Scale [¹ not for use in CA]	16 fl oz	<p>Apply with ground or air equipment as a full coverage spray (minimum of 5 gals/A by air or 50 gals/A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>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.</p> <p>Lecanium Scale Apply at either dormant, delayed dormant or an in season cover spray. At dormant or delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in season use and rates of oil in your area.</p> <p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.</p> <p>Do not apply within 7 days of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 32 fl oz of KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.218 lb pyriproxyfen per acre per season</p>

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

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

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

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Brassica Leafy Vegetables Broccoli Broccoli Raab (rapini) Brussels Sprouts Cabbage Cauliflower Cavalo Broccolo Chinese Broccoli (gai lan) 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 oz	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 applications per growing season Do not exceed 20 fl oz KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season 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 two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl oz/A for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

BULB VEGETABLES (Crop Group 3)

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

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Bulb Vegetables Garlic Garlic Great Headed Leek Onion Dry Bulb Onion Green Onion Welsh Shallot	Onion Thrips Western Flower Thrip	8 fl oz	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.
	Do not apply within 3 days of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 16 fl oz of KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season 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 insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state, and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

CITRUS
(Including Ugli Fruit and White Sapote)
(Crop Group 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 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
Citrus Ugli Fruit White Sapote	Black Scale Brown Soft Scale California Red Scale Florida Red Scale Snow Scale	16 fl oz	<p>Apply with ground equipment in 200 to 1500 gals/A. Apply in sufficient water volume for tree size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply anytime prior to fruit becoming infested when scale is in the crawler stage. Application at the 2^d or 3^d generation of scale may result in excessive dead scale remaining on the fruit at harvest. Thorough coverage is essential for good control.</p> <p>KNACK may be applied with superior spray oils at 1/2 to 1%. Follow the manufacturer's directions and recommendations on timing and rates.</p> <p>NOTE: For scale apply only one application during emergence of scale crawlers per calendar year.</p>
	Citrus Black Fly Citrus Leafminer Citrus Whitefly	10 fl oz	<p>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.</p> <p>Apply when pests are just beginning to build and before infestation has occurred. Thorough coverage is essential for good control.</p>
<p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.</p> <p>Do not apply within 1 day of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 26 fl oz of KNACK per acre per season Do not apply earlier than 21 days after last KNACK treatment Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season</p>			

continued

CITRUS (Crop Group 10) Including Ugli Fruit and White Sapote continued

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

COTTON

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

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

CROP	PESTS	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
Cotton	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz Do not apply less than 8 fl oz/A	Apply with air or ground equipment in adequate water for uniform coverage By Air 3 to 10 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 application per growing season Do not exceed 10 fl oz KNACK per acre per season Regardless of formulation do not apply more than 0.067 lb pyriproxyfen per acre per season Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after last application			

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

CRANBERRY

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

CROP	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Cranberry	Cherry Fruitworm Cranberry Fruitworm Lecanium Scale	16 fl oz	<p>Apply with ground or air equipment as a full coverage spray (minimum of 5 gals/A by air or at least 20 gals/A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>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.</p> <p>Lecanium Scale Apply at either dormant, delayed dormant or an in season cover spray. At dormant or delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in season use and rates of oil in your area.</p>
<p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.</p> <p>Do not apply within 7 days of harvest Do not make more than 2 KNACK applications per growing season</p> <ul style="list-style-type: none"> • Do not exceed 32 fl oz of KNACK per acre per season <p>Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.218 lb pyriproxyfen per acre per season</p>			

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

CUCURBITS (Crop Group 9)

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

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

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Cucurbits Balsam Apple Balsam Pear Bitter Melon Cantaloupe Chayote Chinese Cucumber Chinese Waxgourd Citron Melon Cucumber Edible Gourd Gherkin <i>Momordica</i> spp Muskmelon Pumpkin Summer Squash Watermelon Winter Squash	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz Do not apply less than 8 fl oz/A	Apply with air or ground equipment in adequate water for uniform coverage By air 3 to 10 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
<ul style="list-style-type: none"> • Do not apply within 7 days of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 20 fl oz KNACK per acre per season • Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application 			

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

FRUITING VEGETABLES (Crop Group 8)

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

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

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Fruiting Vegetables Eggplant Ground Cherry Okra Pepino Pepper Tomatillo Tomato	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz Do not apply less than 8 fl oz/A of KNACK when used as a stand alone application	Apply with air or ground equipment in adequate water for uniform coverage 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
	Banded Wing Whitefly Cabbage Looper Green Peach Aphid Greenhouse Whitefly (immatures & adults) Silverleaf Whitefly Sweetpotato Whitefly Tobacco Hornworm	6 to 8 fl oz + ORTHENE® 75 S 0.66 to 1.33 lbs/A or ORTHENE 97 0.5 to 1.0 lb/A	Apply as a tank mix with ground equipment for uniform coverage (25 to 150 gals/A by ground). Make application when eggs or insects first appear. If control is needed during this period use an alternate insecticide registered for the target pest. KNACK 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 labels for ORTHENE 75 S or ORTHENE 97.
	Do not apply within 1 day of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 20 fl oz KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.109 lb pyriproxyfen per acre per season Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application		

continued

FRUITING VEGETABLES (Crop Group 8) - continued

CROP	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Fruiting Vegetables Tomato	Banded Wing Whitefly Beet Armyworm Fruitworm Greenhouse Whitefly (immatures & adults) Potato Aphid Silverleaf Whitefly Sweetpotato Whitefly Thrips Tomato Pinworm Yellowstriped Armyworm	6 to 8 fl oz + MONITOR® 4 Spray 24 fl oz + DANITOL® 2 4 EC Spray 10 2/3 fl oz	<p>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</p> <p>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</p> <p>KNACK may also be mixed or alternated with commonly used insecticides to comply with local IPM programs</p> <p>Comply with all applicable directions restrictions and precautions on the registered labels for MONITOR 4 Spray and DANITOL 2 4 EC Spray</p> <p>Do not apply within 14 days of harvest</p> <ul style="list-style-type: none"> Do not make more than 2 KNACK applications per growing season <p>Do not exceed 16 fl oz KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application</p>

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

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 has no activity on adult insects but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

CROP	PESTS	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
Grape	Glassy Winged Sharpshooter Grape Berry Moth Lecanium Scale	16 fl oz	<p>Apply with ground equipment as a full coverage spray (50 to 200 gals/A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>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.</p> <p>Follow local recommendations regarding in season use and rates of oil in your area.</p>
<ul style="list-style-type: none"> • Do not apply within 21 days of harvest • Do not make more than 2 KNACK applications per growing season • Do not exceed 32 fl oz KNACK per acre per season • Do not apply earlier than 14 days after last KNACK treatment • Regardless of formulation, do not apply more than 0.218 lb active of pyriproxyfen per acre per season 			

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

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

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

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Leafy Vegetables (Except Brassica Vegetables) 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 Purslane Garden Purslane Winter Radicchio (Red Chicory) Rhubarb Spinach New Zealand Spinach Vine Spinach Swiss Chard	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz	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
			Do not apply within 14 days of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 20 fl oz KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application Do not apply this product with an adjuvant

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

LEAVES OF ROOT & TUBER VEGETABLES (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 has no activity on adult insects but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

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

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Leaves of Root & Tuber Vegetables Beet Garden Burdock Edible Carrot Cassava Bitter Cassava Sweet Celerrac Chervil Turnip Rooted Chicory Dasheen (Taro) Parsnip Radish Radish Oriental (daikon) Rutabaga Salsify Black Sugar Beet Sweet Potato Tanier Turnip Yam True	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz	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 applications per growing season <ul style="list-style-type: none"> • Do not exceed 16 fl oz KNACK per acre per season • Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.109 lb pyriproxyfen per acre per season <ul style="list-style-type: none"> • Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application • Do not allow livestock to graze on treated areas Do not apply this product with an adjuvant		

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

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

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

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

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Legume Vegetables (any cultivar of Bean (<i>Phaseolus</i>) Field Pea (<i>Pisum</i>) and Soybean) Beans (<i>Lupinus</i>) Grain Lupin Sweet Lupin White Lupin White Sweet Lupin Beans (<i>Phaseolus</i>) Field Bean Kidney Bean Lima Bean Navy Bean Pinto Bean Runner Bean Snap Bean Tepary Bean Wax Bean Bean (<i>Vigna</i>) 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 Lentil Pea (<i>Pisum</i>) Dwarf Pea Edible podded Pea English Pea Field Pea Garden Pea Green Pea Snowpea Sugar Snap Pea Pigeon Pea Soybean ^[1] Sword Bean	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz	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. 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 may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs. [1 CA only not for use on soybeans] Do not apply within 7 days of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 20 fl oz of KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application Do not allow livestock to graze treated areas Do not use on legume vegetables varieties grown for livestock feed		

continued

LEGUME VEGETABLES (Crop Group 6) continued

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

OLIVE

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

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

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

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 has no activity on adult insects but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Pasture Grass and Rangeland	Cricket Grasshopper Locust	8 to 10 fl oz	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 pests reach threshold levels per University/Extension recommendations Under severe pressure use the higher recommended rates
<ul style="list-style-type: none"> • Do not make more than 2 KNACK applications per growing season • Do not exceed 20 fl oz KNACK per acre per season • Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season • Do not apply earlier than 14 days after last KNACK treatment 			

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

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

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

CROP	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Pawpaw	Scale Whitefly	13 to 16 fl oz	<p>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.</p> <p>Scale Apply at either dormant, delayed dormant or an in season cover spray. At dormant or delayed dormant use a spray oil at the manufacturer's recommended oil rate. Do not use oil in an in season spray.</p> <p>In a cover spray make applications when scale crawlers first emerge.</p> <p>Under heavy scale pressure use the higher rate of KNACK.</p>
	<p>In season sprays of KNACK may not protect fruit from blemishes by scale.</p> <p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.</p> <ul style="list-style-type: none"> • Do not apply within 14 days of harvest Do not make more than 3 KNACK applications per growing season Do not exceed 48 fl oz of KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.327 lb pyriproxyfen per acre per season 		

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

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 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
Pineapple	Black Scale Brown Soft Scale California Red Scale Florida Red Scale Snow Scale	16 fl oz	<p>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.</p> <p>Apply anytime prior to fruit becoming infested when scale is in the crawler stage. Application at the 2^d or 3^d generation of scale may result in excessive dead scale remaining on the fruit at harvest. Thorough coverage is essential for good control.</p> <p>KNACK may be applied with superior spray oils at 1/2 to 1%. Follow the manufacturer's directions and recommendations on timing and rates.</p>
<p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.</p> <ul style="list-style-type: none"> Do not apply within 1 day of harvest Do not make more than 2 KNACK applications per calendar year • Do not exceed 32 fl oz of KNACK per acre per season Do not apply earlier than 21 days after last KNACK treatment Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season 			

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

**POME FRUIT
(Crop Group 11)**

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

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
<p>Pome Fruit Apple Crabapple Loquat Mayhaw Quince</p>	<p>Codling Moth</p> <p>Suppression of Pandemis Leafroller Obliquebanded Leafroller</p>	<p>13 to 16 fl oz</p>	<p>Apply by ground with airblast equipment in a minimum of 50 gals/A. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>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 KNACK. Follow local recommendations regarding in season use and rates of oil in your area.</p> <p>Obliquebanded and Pandemis Leafroller Apply to the overwintering larvae at the pink to petal fall tree growth stage. KNACK does not directly control the larvae but inhibits normal pupation and adult emergence.</p>
	<p>Florida Red Scale Lecanium Scale San Jose Scale</p>	<p>13 to 16 fl oz</p>	<p>Apply by ground with airblast equipment in a minimum of 50 gals/A. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Apply at delayed dormant through pink. For delayed dormant use a superior spray oil at the manufacturer's recommended rate of oil. Under heavy scale pressure use the higher rate of KNACK.</p> <p>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.</p>

continued

POME FRUIT (Crop Group 11) continued

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

continued

POME FRUIT (Crop Group 11) continued

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
<p>Pome Fruit Pear Oriental Pear</p>	<p>Codling Moth Suppression of Obliquebanded Leafroller Pandemis Leafroller</p>	<p>13 to 16 fl oz</p>	<p>Apply by ground with airblast equipment in 100 to 400 gals/A</p> <p>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 Follow local recommendations regarding in season use and rates of oil in your area</p> <p>For additional generations apply other insecticides registered for Codling Moth Control</p>
<p>KNACK may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs</p> <p>Do not apply within 45 days of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 32 fl oz of KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.218 lb pyriproxyfen per acre per season</p>			

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

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

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

CROP	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Pomegranate	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	13 to 16 fl oz	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 applications per growing season Do not exceed 48 fl oz of KNACK per acre per season <ul style="list-style-type: none"> • Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.327 lb pyriproxyfen per acre per season Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application		

MANAGING INSECT RESISTANCE Repeated use of the same class of insecticides or insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to three applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 13 fl oz per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

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

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

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Root & Tuber Vegetables 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 Radish Radish Oriental (dai kon) Rutabaga Salsify Salsify Black Salsify Spanish Skirret Sweet Potato Tanier Turmeric Turnip Yam Bean Yam True	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 fl oz	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
Do not apply within 7 days of harvest Do not make more than 2 KNACK applications per growing season Do not exceed 16 fl oz of KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.109 lb pyriproxyfen per acre per season Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application Do not allow livestock to graze treated areas			

continued

ROOT AND TUBER VEGETABLES (Crop Group 1) continued

MANAGING WHITEFLY RESISTANCE Repeated use of the same class of insecticides or insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U S A Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl oz per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state, and federal 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)
(Crop Group 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 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
Small Fruit Vine Climbing Crops Berry Schisandra Gooseberry Grape Amur River Kiwifruit Fuzzy Kiwifruit Hardy Maypop and cultivars varieties and/or hybrids of these	Scale	16 fl oz	Apply with ground or air equipment as a full coverage spray (minimum of 5 gals/A by air or 50 gals/A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage. Apply at either dormant, delayed dormant, or an in-season cover spray. At dormant or delayed dormant, use a spray oil at the manufacturer's recommended oil rate. In a cover spray, make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.
	KNACK may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs. <ul style="list-style-type: none"> • Do not apply within 30 days of harvest • Do not make more than 2 KNACK applications per growing season • Do not exceed 32 fl oz of KNACK per acre per season • Do not apply earlier than 14 days after last KNACK treatment • Regardless of formulation, do not apply more than 0.218 lb pyriproxyfen per acre per season • Do not apply this product with an adjuvant 		

MANAGING INSECT RESISTANCE Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state, and federal IPM and 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 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
Stone Fruit Apricot Cherry Chickasaw Plum Damson Plum Fresh Prune Japanese Plum Nectarine Peach Plum Plumcot Prune	Lecanium Scale San Jose Scale	13 to 16 fl oz	Apply in 100 to 400 gals/A with ground equipment. Coverage is essential for good control. Apply in sufficient water volume for tree size. Use of higher water volume will assure better coverage.
	Suppression of Peach Twig Borer Oriental Fruit Moth		<p>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.</p> <p>Under heavy scale pressure, use the higher rate of KNACK.</p> <p>Peach Twig Borer KNACK has provided good suppression of Peach Twig Borer when applied delayed dormant through bloom sprays. Use a spray oil at the manufacturer's recommended rate for the stage of crop growth.</p>
In season sprays of KNACK may not protect fruit from blemishes by scale.			
KNACK 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.			
<ul style="list-style-type: none"> • Do not make more than 3 KNACK applications per growing season. 			
Do not exceed 48 fl oz of KNACK per acre per season.			
Do not apply earlier than 14 days after last KNACK treatment.			
Regardless of formulation, do not apply more than 0.327 lb pyriproxyfen per acre per season.			

MANAGING INSECT RESISTANCE Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to three applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state, and federal IPM and 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 has no activity on adult insects but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

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

CROP	PESTS	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
Strawberry	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	10 fl oz	<p>Apply with ground equipment as a full coverage spray (100 to 400 gals/A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).</p> <p>Under severe pressure, use the higher recommended rates.</p> <p>Only whole fields should be treated.</p>
			<ul style="list-style-type: none"> • Do not apply within 2 days of harvest • Do not make more than 2 KNACK applications per growing season • Do not exceed 20 fl oz KNACK per acre per season • Do not apply earlier than 30 days after last KNACK treatment • Regardless of formulation, do not apply more than 0.134 lb of pyriproxyfen per acre per season • 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 two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state, and federal Integrated Pest Management (IPM) and Integrated Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

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

CROP	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Tree Nuts Almond	Black Scale San Jose Scale Suppression of Peach Twig Borer	13 to 16 fl oz	Apply with ground equipment in 100 to 400 gals/A. Coverage is essential for good control. Apply in sufficient water volume for tree size. Use of higher water volume will assure better coverage. 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. KNACK has provided good suppression of Peach Twig Borer when applied dormant through bloom sprays.
	Almond Do not apply within 21 days of harvest Do not make more than 1 KNACK application per growing season Do not exceed 16 fl oz of KNACK per acre per season Regardless of formulation, do not apply more than 0.109 lb pyriproxyfen per acre per season		

continued

MANAGING INSECT RESISTANCE Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to one application per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal 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) continued

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Tree Nuts Beechnut Brazil Butternut Cashew Chestnut Chinquapin Filbert (Hazelnut) Hickory Macadamia Pecan Pistachio Walnut	Codling Moth Dusky Veined Aphid Walnut Aphid	16 fl oz	Apply with ground equipment in 100 to 400 gals/A. Apply in sufficient water volume for tree size. Thorough coverage is critical for control. It is essential to use adequate water volume to ensure thorough coverage. 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. Follow local recommendations regarding in season use and rates of oil in your area.
	Black Scale Brown Soft Scale Italian Scale Lecanium Scale San Jose Scale Walnut Scale Suppression of Peach Twig Borer	13 to 16 fl oz	Apply with ground equipment in 100 to 400 gals/A at either dormant, delayed dormant or an in season cover spray. The addition of a superior spray oil at dormant or delayed dormant may improve scale control. However, do not use a spray oil in oil sensitive crops such as Walnut. Follow manufacturer's recommendations regarding use and rates of oil for your area. 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 coverage.
	KNACK 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 applications per growing season Do not exceed 32 fl oz of KNACK per acre per season Do not apply earlier than 14 days after last KNACK treatment Regardless of formulation do not apply more than 0.218 lb pyriproxyfen per acre per season		

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

TROPICAL & SUBTROPICAL FRUIT

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

CROPS	PEST	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
Tropical & Subtropical Fruit Acerola Atemoya Avocado Biriba Black Sapote Canistel Cherimoya Custard Apple Feijoa Guava Ilima Jaboticaba Longan Lychee Mamey Sapote Mango Passionfruit Papaya Pulasan Rambutan Sapodilla Soursop Spanish Lime Star Apple Starfruit Sugar Apple Wax Jambu	Scale	16 fl oz	Apply with ground or air equipment as a full coverage spray (minimum of 5 gals/A by air or 50 gals/A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage. Apply at either dormant, delayed dormant, or an in-season cover spray. At dormant or delayed dormant, use a spray oil at the manufacturer's recommended oil rate. In a cover spray, make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.
			KNACK may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs. Do not apply within 14 days of harvest. Do not make more than 2 KNACK applications per growing season. Do not exceed 32 fl oz of KNACK per acre per season. Do not apply earlier than 14 days after last KNACK treatment. Regardless of formulation, do not apply more than 0.218 lb pyriproxyfen per acre per season.

MANAGING INSECT RESISTANCE Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state, and federal IPM and 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 has no activity on adult insects but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an insect growth regulator (IGR) and activity depends on the insects' development, evidence of activity will be slower than typical contact insecticides.

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

CROP	PESTS	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
Watercress	Sharpshooters Whitefly	8 to 10 fl oz	<p>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.</p> <p>Begin applications when whiteflies reach threshold levels per University/Extension recommendations.</p> <p>Under severe pressure, use the higher recommended rates.</p> <p>Only whole fields should be treated.</p>
	<ul style="list-style-type: none"> • Do not apply within 7 days of harvest • Do not make more than 2 KNACK applications per growing season • Do not exceed 20 fl oz KNACK per acre per season • Do not apply earlier than 14 days after last KNACK treatment • Regardless of formulation, do not apply more than 0.134 lb of pyriproxyfen per acre per season • Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application • Do not apply this product with an adjuvant 		

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 two applications per growing season. KNACK may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl oz per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state, and federal Integrated Pest Management (IPM) and Integrated 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

Store in a cool dry place
Keep pesticide in original container
Keep container closed when not in use
Do not put concentrate or dilute into food or drink containers
Not for use or storage in or around the home
For help with any spill leak fire or exposure involving this material call day or night 800 892 0099

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility

CONTAINER DISPOSAL

[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 puncture and dispose of in a sanitary landfill or by incineration or if allowed by state and local authorities by burning If burned stay out of smoke]

[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 Offer for recycling if available]

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