

CUSACK™ **0.86 EC**



Contains pyriproxyfen, the active ingredient used in Knack®.

ACTIVE INGREDIENT:	By Weight
Pyriproxyfen	11.23%
OTHER INGREDIENTS:	88.77%
TOTAL:	100.00%
(2-[1-methyl-2-(4-phenoxyphenoxy)ethoxy]pyridine)	
Contains 0.86 pound ai per gallon.	
Contains aromatic petroleum distillates.	
EPA Reg. No.: 91234-58	

SPECIMEN

KEEP OUT OF REACH OF CHILDREN CAUTION

See below for additional Precautionary Statements.

FIRST AID	
If on skin:	<ul style="list-style-type: none"> 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:	<ul style="list-style-type: none"> 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:	<ul style="list-style-type: none"> 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:	<ul style="list-style-type: none"> 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. For emergency medical assistance, call SafetyCall: 1-844-685-9173. For additional information on this pesticide product (including pesticide incidents), you may call CHEMTREC at 1-800-424-9300, 24 hours per day, 7 days per week.	
NOTE TO PHYSICIAN: 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.	

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

Cusack™ 0.86 EC is not manufactured, or distributed by Valent U.S.A. Corporation, seller of Knack®.



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

CAUTION

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

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants or long-sleeved shirt and long pants,
- Chemical-resistant gloves, such as Barrier Laminate or Viton \geq 14 mils,
- Chemical-resistant footwear plus socks,
- Chemical-resistant headgear for overhead exposure,
- Chemical-resistant apron when cleaning equipment, mixing or loading.

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

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

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

DIRECTIONS FOR USE

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

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

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE), and Restricted-Entry Interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

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 WPS and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants,
- Chemical-resistant gloves, such as Barrier Laminate or Viton \geq 14 mils,
- Chemical-resistant footwear plus socks,
- Chemical-resistant headgear for overhead exposure.

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.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance-management, **Cusack 0.86 EC** contains a Group 7 insecticide. Any insect population may contain individuals naturally resistant to **Cusack 0.86 EC** and other Group 7 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of **Cusack 0.86 EC** or other Group 7 insecticides within a growing season, or among growing seasons, with different groups that control the same pests. Avoid application of more than the maximum seasonal use rate or the total number of consecutive sprays of **Cusack 0.86 EC** per season.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
 - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
 - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
 - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
 - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
 - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance management and/or IPM recommendations for the specific site and pest problems in your area.



SPRAY DRIFT

Aerial Applications

- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a fine or coarser droplet size (ASABE S572.1), except for when applying ultra-low volume applications.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed-wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions.

Airblast Applications

- All sprays must be directed into the canopy.
- Nozzles directed out of the orchard must be turned off when treating the outer row, or when making turns between rows.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

Groundboom Applications

- User must only apply with the nozzle height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a fine or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

Adjust Nozzles – Follow nozzle manufacturer's recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT – Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

PRODUCT INFORMATION

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

Cusack 0.86 EC is intended for use in Integrated Pest Management (IPM) or Insect Resistance Management (IRM) programs. Cusack 0.86 EC 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.

Cusack 0.86 EC acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. **Cusack 0.86 EC** has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since **Cusack 0.86 EC** is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.



ASPARAGUS*

Cusack 0.86 EC acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. **Cusack 0.86 EC** has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since **Cusack 0.86 EC** is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

Cusack 0.86 EC does exhibit translaminar movement which means that **Cusack 0.86 EC** applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

Pests	Product Rates Per Acre	Instructions
Whitefly	8 to 10 fl ozs	Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/A). HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL. Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g., 3 to 5 adults per leaf and/or equivalent levels of immatures). Under severe pressure, use the higher labeled rates. Only whole fields should be treated but is not required.

Restrictions:

- Do not apply within 7 days of harvest.
- Do not make more than 2 **Cusack 0.86 EC** applications per growing season.
- Do not exceed 20 fl ozs of **Cusack 0.86 EC** per acre per calendar year.
- Do not apply earlier than 14 days after last **Cusack 0.86 EC** treatment.
- Regardless of formulation, do not apply more than 0.134 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

*Not For Use in California

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, Atticus, LLC is restricting **Cusack 0.86 EC** to no more than two applications per growing season. **Cusack 0.86 EC** may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Atticus, LLC also does not recommend using rates below 8 fl ozs per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

BERRY*

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

Cusack 0.86 EC acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. **Cusack 0.86 EC** has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since **Cusack 0.86 EC** 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	Instructions
Bearberry Bilberry Blueberry, Lowbush Cloudberry Cranberry Lingonberry Muntries Partridgeberry Cultivars, varieties, and/or hybrids of these	Cherry Fruitworm Cranberry Fruitworm Lecanium Scale	16 fl ozs	Apply with ground or air equipment as a full coverage spray (minimum of 5 gals/A by air or 50 gals/A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage. Fruitworms: Apply when egg laying begins and again at petal fall. Additional applications of another insecticide, at 10 to 14 day intervals, may be needed under high population pressure or sustained moth flight. Lecanium Scale: Apply at either dormant, delayed dormant or an 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.

Cusack 0.86 EC may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

Restrictions:

- Do not apply within 7 days of harvest.
- Do not make more than 2 **Cusack 0.86 EC** applications per growing season.
- Do not exceed 32 fl ozs of **Cusack 0.86 EC** per acre per calendar year.
- Do not apply earlier than 14 days after last **Cusack 0.86 EC** treatment.
- Regardless of formulation, do not apply more than 0.215 lb pyriproxyfen per acre per calendar year.

*Not for use in California.

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, Atticus, LLC is restricting **Cusack 0.86 EC** to no more than two applications per growing season. **Cusack 0.86 EC** 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)

Cusack 0.86 EC acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. **Cusack 0.86 EC** has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since **Cusack 0.86 EC** is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

Cusack 0.86 EC does exhibit translaminar movement which means that **Cusack 0.86 EC** 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 Rate Per Acre	Instructions
Broccoli	Kale	Banded Wing Whitefly	8 to 10 fl ozs	Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/A). HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL. Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g., 3 to 5 adults per leaf and/or or equivalent levels of immatures). Under severe pressure, use the higher labeled rates. Only whole fields should be treated but is not required.
Broccoli Raab (rapini)	Kohlrabi	Greenhouse Whitefly		
Brussels Sprouts	Mizuna	Silverleaf Whitefly		
Cabbage	Mustard Greens	Sweetpotato Whitefly		
Cauliflower	Mustard Spinach			
Cavalo Broccoli (gai Ion)	Rape Greens			
Chinese Cabbage (bok choy and napa)	Turnip Greens			
Chinese Mustard (gai choy)				
Collards				

Restrictions:

- Do not apply within 7 days of harvest.
- Do not make more than 2 **Cusack 0.86 EC** applications per growing season.
- Do not exceed 20 fl ozs of **Cusack 0.86 EC** per acre per calendar year.
- Do not apply earlier than 14 days after last **Cusack 0.86 EC** treatment.
- Regardless of formulation, do not apply more than 0.134 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

MANAGING WHITEFLY RESISTANCE: Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Atticus, LLC is restricting **Cusack 0.86 EC** to no more than two applications per growing season. **Cusack 0.86 EC** may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Atticus, LLC also does not recommend using rates below 8 fl ozs/A for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

BULB VEGETABLES

(Crop Group 3-07)

Cusack 0.86 EC acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. **Cusack 0.86 EC** has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since **Cusack 0.86 EC** 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	Instructions
Garlic	Onion Thrips	8 fl ozs	FOR SUPPRESSION OF THRIPS: Apply with ground equipment in adequate water for uniform coverage (20 to 50 gals/A). Begin applications when thrips reach threshold levels per University/Extension. Thorough coverage is critical for adequate water volume to ensure thorough coverage.
Garlic, Great Headed	Western Flower Thrips		
Leek			
Onion, Dry Bulb			
Onion, Green			
Onion, Welsh			
Shallot			

Cusack 0.86 EC may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

Restrictions:

- Do not apply within 3 days of harvest.
- Do not make more than 2 **Cusack 0.86 EC** applications per growing season.
- Do not exceed 16 fl ozs of **Cusack 0.86 EC** per acre per calendar year.
- Do not apply earlier than 14 days after last **Cusack 0.86 EC** treatment.
- Regardless of formulation, do not apply more than 0.108 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

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, Atticus, LLC is restricting **Cusack 0.86 EC** to no more than two applications per growing season. **Cusack 0.86 EC** 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

Cusack 0.86 EC acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. **Cusack 0.86 EC** has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since **Cusack 0.86 EC** is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

Cusack 0.86 EC does exhibit translaminar movement which means that **Cusack 0.86 EC** applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

Pests	Product Rate Per Acre	Instructions
Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl ozs Do not apply less than 8 fl ozs/A.	Apply with air or ground equipment in adequate water for uniform coverage: By Air: 3 to 10 gals/A By Ground: 10 to 50 gals/A HIGHER WATER VOLUMES 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 labeled rates. Only whole fields should be treated but is not required.

Restrictions:

- Do not apply within 28 days of harvest.
- Do not make more than 1 **Cusack 0.86 EC** application per growing season.
- Do not exceed 10 fl ozs of **Cusack 0.86 EC** per acre per calendar year.
- Regardless of formulation, do not apply more than 0.067 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after last application.

MANAGING WHITEFLY RESISTANCE: Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Atticus, LLC is restricting **Cusack 0.86 EC** to no more than one application per growing season. **Cusack 0.86 EC** may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Atticus, LLC also does not recommend using rates below 8 fl ozs per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

CUCURBITS

(Crop Group 9)

Cusack 0.86 EC acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. **Cusack 0.86 EC** has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since **Cusack 0.86 EC** is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

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Crops	Pests	Product Rate Per Acre	Instructions
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	8 to 10 fl ozs Do not apply less than 8 fl ozs/A.	Apply with air or ground equipment in adequate water for uniform coverage: By Air: 3 to 10 gals/A By Ground: 10 to 50 gals/A HIGHER WATER VOLUMES MAY 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 labeled rates. Only whole fields should be treated but is not required.

Restrictions:

- Do not apply within 7 days of harvest.
- Do not make more than 2 **Cusack 0.86 EC** applications per growing season.
- Do not exceed 20 fl ozs of **Cusack 0.86 EC** per acre per calendar year.
- Do not apply earlier than 14 days after last **Cusack 0.86 EC** treatment.
- Regardless of formulation, do not apply more than 0.134 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

MANAGING WHITEFLY RESISTANCE: Repeated use of the same class of insecticides or insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Atticus, LLC is restricting **Cusack 0.86 EC** to no more than one application per growing season. **Cusack 0.86 EC** may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Atticus, LLC also does not recommend using rates below 8 fl ozs per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.



FRUITING VEGETABLES

(Crop Group 8-10)

Cusack 0.86 EC acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. **Cusack 0.86 EC** has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since **Cusack 0.86 EC** is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

Cusack 0.86 EC does exhibit translaminar movement which means that **Cusack 0.86 EC** 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 Rate Per Acre	Instructions
African Eggplant	Sunberry	Banded Wing Whitefly	8 to 10 fl ozs	Apply with air or ground equipment in adequate water for uniform coverage: By Air: 3 to 10 gals/A By Ground: 10 to 50 gals/A HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL. Begin 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 labeled rates. Only whole fields should be treated but is not required.
Bush Tomato	Tomatillo	Greenhouse Whitefly	Do not apply less than 8 fl ozs/A of Cusack 0.86 EC when used as a stand-alone application.	
Bell Pepper	Tomato	Silverleaf Whitefly		
Cocona	Tree Tomato	Sweetpotato Whitefly		
Currant Tomato	Cultivars, varieties, and/or hybrids or these			
Eggplant				
Garden Huckleberry				
Goji Berry				
Ground Cherry				
Martynia				
Naranjilla		Banded Wing Whitefly	6 to 8 fl ozs	Apply as a tank mix with ground equipment for uniform coverage (25 to 150 gals/A by ground). Make application when eggs or insects first appear. If control is needed during this period use an alternate insecticide registered for the target pest. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.
Okra		Cabbage Looper		
Pea Eggplant		Green Peach Aphid		
Pepino		Greenhouse Whitefly (immatures & adults)		
Pepper, Bell		Silverleaf Whitefly		
Pepper, Nonbell		Sweetpotato Whitefly		
Roselle		Tobacco Hornworm		
Scarlet Eggplant				

Cusack 0.86 EC may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

Restrictions:

- Do not apply within 1 day of harvest.
- Do not make more than 2 **Cusack 0.86 EC** applications per growing season.
- Do not exceed 16 fl ozs of **Cusack 0.86 EC** per acre per calendar year.
- Do not apply earlier than 14 days after last **Cusack 0.86 EC** treatment.
- Regardless of formulation, do not apply more than 0.108 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

Crops	Pests	Product Rate Per Acre	Instructions
Tomato	Banded Wing Whitefly Beet Armyworm Greenhouse Whitefly (immatures & adults) Potato Aphid Silverleaf Whitefly Sweetpotato Whitefly Thrips Tomato Pinworm Yellowstriped Armyworm	6 to 8 fl ozs + Danitol® 2.4 EC Spray 10-2/3 fl ozs	EARLY SEASON WHITEFLY CONTROL PROGRAM FOR REDUCTION OF GEMINIVIRUS: Apply as a tank mix with ground equipment for uniform coverage (10 to 120 gals/A). Make application when scouting first indicates adult whiteflies are on young plants. NOTE: This may result in treatment immediately following transplanting. MID TO LATE SEASON WHITEFLY CONTROL PROGRAM FOR PREVENTION OF IRREGULAR FRUIT RIPENING: Apply as a tank mix with ground equipment for uniform coverage (20 to 120 gals/A by ground). Make application when scouting indicates whiteflies are present. Cusack 0.86 EC may also be mixed or alternated with commonly used insecticides to comply with local IPM programs. Comply with all applicable directions, restrictions and precautions on the registered label for Danitol 2.4 EC spray.

Cusack 0.86 EC may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

Restrictions:

- Do not apply within 14 days of harvest.
- Do not make more than 2 **Cusack 0.86 EC** applications per growing season.
- Do not exceed 16 fl ozs of **Cusack 0.86 EC** per acre per calendar year.
- Do not apply earlier than 14 days after last **Cusack 0.86 EC** treatment.
- Regardless of formulation, do not apply more than 0.108 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

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, Atticus, LLC is restricting **Cusack 0.86 EC** to no more than two applications per growing season. **Cusack 0.86 EC** 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.



Manufactured for:
Atticus, LLC
 940 NW Cary Parkway, Suite 200
 Cary, NC 27513

GRAPE

Cusack 0.86 EC acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. **Cusack 0.86 EC** has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since **Cusack 0.86 EC** is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

Pests	Product Rate Per Acre	Instructions
Glassy-Winged Sharpshooter Grape Berry Moth Lecanium Scale	16 fl ozs	Apply with ground equipment as a full coverage spray (50 to 200 gals/A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage. Lecanium Scale: Apply at either dormant, delayed dormant or an in-season cover spray. At dormant, delayed dormant you may use a spray oil at the manufacturer's recommended oil rate. Do not use oil in an in-season spray. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.

Cusack 0.86 EC may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.

Restrictions:

- Do not apply within 21 days of harvest.
- Do not make more than 2 **Cusack 0.86 EC** applications per growing season.
- Do not exceed 32 fl ozs of **Cusack 0.86 EC** per acre per calendar year.
- Do not apply earlier than 14 days after last **Cusack 0.86 EC** treatment.
- Regardless of formulation, do not apply more than 0.215 lb pyriproxyfen per acre per calendar year.

MANAGING INSECT RESISTANCE: Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Atticus, LLC is restricting **Cusack 0.86 EC** to no more than two applications per growing season. **Cusack 0.86 EC** 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.

LEGUME VEGETABLES

Succulent or Dried (Crop Group 6)

Cusack 0.86 EC acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. **Cusack 0.86 EC** has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since **Cusack 0.86 EC** is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

Cusack 0.86 EC does exhibit translaminar movement which means that **Cusack 0.86 EC** 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 Rate Per Acre	Instructions
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 Chickpea (garbanzo) Guar	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)	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 ozs	EARLY SEASON WHITEFLY PROGRAM: Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage. 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 labeled rates. Only whole fields should be treated but is not required.

¹California only: Not for use on soybeans

Restrictions:

- Do not apply within 7 days of harvest.
- Do not make more than 2 **Cusack 0.86 EC** applications per growing season.
- Do not exceed 20 fl ozs of **Cusack 0.86 EC** per acre per calendar year.
- Do not apply earlier than 14 days after last **Cusack 0.86 EC** treatment.
- Regardless of formulation, do not apply more than 0.134 lb pyriproxyfen per acre per calendar year.
- Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.
- Do not allow livestock to graze on treated areas.
- Do not use on legume vegetables varieties grown for livestock feed.

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, Atticus, LLC is restricting **Cusack 0.86 EC** to no more than two applications per growing season. **Cusack 0.86 EC** may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Atticus, LLC also does not recommend using rates below 8 fl ozs per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state, and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.



STORAGE AND DISPOSAL

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

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

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

CONTAINER HANDLING: Containers ≤ 5 gallons - Non-refillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

Containers > 5 gallons - Non-refillable container. Do not reuse or refill this container. Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

Conditions of Sale and Limitation of Warranty and Liability

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials, resistant strains or other influencing factors in the use of the product, which are beyond the control of Atticus, LLC or Seller. To the extent consistent with applicable law all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Atticus, LLC and Seller harmless for any claims relating to such factors.

To the extent allowed by applicable laws, Atticus, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Atticus, LLC and Buyer and User assume the risk of any such use. TO THE EXTENT ALLOWABLE BY APPLICABLE LAW, ATTICUS, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent allowed by applicable laws, in no event shall Atticus, LLC or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT ALLOWABLE BY APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ATTICUS, LLC AND 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 THE PRODUCT OR, AT THE ELECTION OF ATTICUS, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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