



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 7, 2018

Ms. Catherine M. Holmes
Product Registration Manager
BASF Corporation, Agricultural Products
26 Davis Drive, P.O. Box 13528
Research Triangle Park, NC 27709-3528

Subject: Label Amendment – Addition of State-Specific Buffer Zones for Ground & Aerial Applications in Florida and New York
Product Name: Sefina[®] Insecticide
EPA Registration Number: 7969-391
Application Date: November 30, 2018
Decision Number: 546901

Dear Ms. Holmes:

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

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

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

Page 2 of 2
EPA Reg. No. 7969-391
Decision No. 546901

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

Sincerely,



Richard Gebken
Product Manager 10
Invertebrate & Vertebrate Branch 2
Registration Division (7505P)
Office of Pesticide Programs

Enclosure: Stamped "Accepted" Master Label, dated December 7, 2018



We create chemistry

AFIDOPYROPEN GROUP 9D INSECTICIDE

ACCEPTED
12/07/2018
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-391

Sefina™

Insecticide

[Optional text: ABN: Sefina™ Inscalis® Insecticide]

For use in citrus, cotton, cucurbits, fruiting vegetables, soybean, tree nuts, and tuberous and corm vegetables

Powered by Inscalis® insecticide

Active Ingredient:

Afidopyropen, [(3S,4R,4aR,6S,6aS,12R,12aS,12bS)-3-[(cyclopropylcarbonyl)oxy]-1,3,4,4a,5,6,6a,12,12a,12b-decahydro-6,12-dihydroxy-4,6a,12b-trimethyl-11-oxo-9-(3-pyridinyl)-2H,11H-naphtho[2,1-b]pyrano[3,4-e]pyran-4-yl)methyl cyclopropanecarboxylate 4.89%

Other Ingredients: 95.11%

Total: 100.00%

Contains 0.42 pound of afidopyropen per gallon, formulated as a dispersible concentrate.

EPA Reg. No. 7969-391

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

See inside for complete First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call 1-800-832-HELP (4357), twenty-four (24) hours per day seven (7) days per week.

Net Contents:

BASF Corporation
26 Davis Drive, Research Triangle Park, NC 27709

FIRST AID	
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.
If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • DO NOT induce vomiting unless told to do so by a poison control center or doctor. • DO NOT give anything to an unconscious person.
If on skin	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. For additional information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), you may contact BASF Corporation at 1-800-832-HELP (4357), twenty-four (24) hours per day seven (7) days per week.</p>	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if inhaled or swallowed. Avoid contact with skin or clothing. Avoid breathing spray mist. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves made of barrier laminate or butyl rubber ≥ 14 mils or nitrile rubber ≥ 14 mils or neoprene rubber ≥ 14 mils or polyvinyl chloride (PVC) ≥ 14 mils or viton ≥ 14 mils, and
- Shoes plus socks

User Safety Requirements

Follow the 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. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE 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

Terrestrial Use

DO NOT apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate. **DO NOT** pour equipment washwaters or rinsate down into a natural drain or water body. **DO NOT** exceed the maximum seasonal use rate or the total number of applications of **Sefina™ insecticide** per season. To reduce the potential for developing insecticide-resistance, rotate to an insecticide with a different mode of action.

Non-target Organisms

Sefina is toxic to aquatic invertebrates. Drift and run-off from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. **DO NOT** apply when weather conditions favor drift from treated areas.

Although Sefina is not acutely toxic to bees, use at the maximum single application rate may have some short-term behavioral effects on adult bees, but is not expected to have long-term impacts on bees and overall colony health.

Ground Water Advisory

Afidopyropen and a degradate of concern may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory

Sefina may impact surface water quality due to run-off of rain water. This is especially true for poorly draining soils and soils with shallow ground water. **Sefina** is classified as having a medium-high potential for reaching both surface water and aquatic sediment via run-off for several weeks to months after application. A well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams and

springs, as required under the **Directions For Use**, will reduce the potential for loading of afidopyropen from run-off and sediment. Run-off of afidopyropen will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Physical or Chemical Hazards

DO NOT mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.

Directions For Use

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

Use Restrictions

- Apply this product only as specified on this label.
- **DO NOT** apply this product using ultra low volume (ULV) applications.
- **Sefina™ insecticide** is intended for use by professional applicators (including farmers and growers).
- **Sefina** is **NOT** for homeowner use.
- **DO NOT** exceed the maximum seasonal use rate, the maximum rate per application, or the total number of **Sefina** applications per season as stated in the **Crop-specific Application Instructions** table. Preharvest Interval (PHI) restrictions are also included in this table.
- **Sefina** is **NOT** for sale, distribution, or use in Nassau or Suffolk counties in New York state except by New York-specific supplemental labeling.
- **Sefina** is **NOT** for use in greenhouses.
- **DO NOT** make more than 2 sequential applications before rotating to a product of a different mode of action group.
- **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.
- **DO NOT** make **Sefina** applications at intervals shorter than 7 days.
- No plant-back interval for Brassica head and stem vegetables, cotton, cucurbits, fruiting vegetables, leaf petioles vegetables, leafy vegetables, pome fruit, root crops, soybean, stone fruit, tree nuts, or tuberous and corm vegetables. A 30-day plant-back interval back is appropriate for all food crops not listed above.
- For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Buffer Zones

Vegetative Buffer Strips. Construct and maintain a minimum 10-foot vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; and estuarine/marine habitats). Only apply products containing afidopyropen onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat. For guidance, refer

to the following publication for information on constructing and maintaining effective buffers: *Conservation Buffers to Reduce Pesticide Losses*. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21pp. <https://permanent.access.gpo.gov/lps9018/www.wcc.nrcs.usda.gov/water/quality/common/pestmgmt/files/newconbuf.pdf>

Buffer Zone for Ground Application (e.g., ground boom, overhead chemigation, or airblast). **DO NOT** apply within 10 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds; and estuarine/marine habitats).

Buffer Zone for Aerial Application. **DO NOT** apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds; and estuarine/marine habitats).

In addition to the buffer zone descriptions listed above, **Florida** and **New York** require the following state-specific buffer zones:

Buffer Zone for Ground Application in Florida and New York:

- **DO NOT** apply within 25 feet of freshwater bodies (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, and natural ponds).
- **DO NOT** apply within 100 feet of estuarine/marine habitats.

Buffer Zone for Aerial Application in Florida and New York:

- **DO NOT** apply within 150 feet of freshwater bodies (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, and natural ponds).
- **DO NOT** apply within 1000 feet of estuarine/marine habitats.

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), notification to workers, 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 long-sleeved shirt and long pants,
- Chemical-resistant gloves made of barrier laminate or butyl rubber \geq 14 mils or nitrile rubber \geq 14 mils or neoprene rubber \geq 14 mils or polyvinyl chloride (PVC) \geq 14 mils or viton \geq 14 mils, and
- Shoes plus socks

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

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. **DO NOT** store near food or feed.

Pesticide Disposal

Wastes resulting from using this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representatives at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; 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.

(continued)

STORAGE AND DISPOSAL (continued)

Container Handling (continued)

Triple rinse containers small enough to shake

(capacity \leq 5 gallons) 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.

Triple rinse containers too large to shake

(capacity $>$ 5 gallons) 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or by other procedures approved by state and local authorities.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

Steps to take if this material is released or spilled:

- In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.
- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

Sefina™ insecticide contains the technical active ingredient **Inscalis® insecticide**, commonly known as afidopyropen. When used as directed, **Sefina** provides knockdown and residual control of listed pests including aphids, whiteflies, and psyllids within the crops included on this label.

Sefina is active against egg, early instar, and adult whitefly life stages. **Sefina** controls all life stages of Asian citrus psyllid. Additionally, some scale pests are controlled or suppressed with **Sefina**. **Sefina** acts quickly to inhibit feeding. While **Sefina** does demonstrate translaminar activity and moves toward plant leaf margins, it is not fully systemic. Therefore, good coverage of plant surfaces will result in the most effective control. Use of sufficient water volume is important, especially under dense canopy to ensure best performance.

Sefina can be used effectively in Integrated Pest Management (IPM) and resistance management programs.

Mode of Action

The active ingredient in **Sefina** is classified by the IRAC (Insecticide Resistance Action Committee) as target-site-of-action **Group 9D** insecticide, a chordotonal organ TRPV (Transient Receptor Potential Vanilloid) channel modulator. **Sefina** disrupts the gating of TRPV channel complexes in chordotonal stretch receptor organs of insects. This disrupts feeding and other behaviors in target insects. Repeated use of insecticides with similar modes of action can lead to the buildup of resistant pest populations.

Resistance Management

For resistance-management, **Sefina** contains a **Group 9D** insecticide. Any insect population may contain individuals naturally resistant to **Sefina** and other **Group 9D** 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 reduce the potential for developing insect resistance, rotate to an insecticide with a different mode of action. Monitor treated pest populations for resistance development. Read product label before applying any insecticide and follow label directions.

To delay insecticide resistance, take the following steps:

- Rotate the use of **Sefina** or other **Group 9D** 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 **Sefina** 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/acaricides 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.
- For further information or to report suspected resistance contact BASF representatives at 1-800-832-HELP (4357).

Application Instructions

For maximum effectiveness, apply **Sefina™ insecticide** at the first sign of pest presence before the populations increase to damaging levels. Application should be timed to coincide with locally recommended treatment threshold levels for the target pest population.

Sefina is rainfast one (1) hour after an application has dried.

Apply Sefina in a sufficient volume of water to ensure thorough coverage of foliage.

Ground Application

Apply to foliage using properly calibrated ground sprayers. Thorough and uniform spray will result in the most effective control. Apply **Sefina** in minimum water volume per acre as indicated in **Crop-specific Application Instructions** table. Applications made at lower volumes may result in less than thorough coverage especially in dense canopy crops. Slower activity and/or less control may result if spray coverage is limited.

Aerial Application

Thorough coverage is required to obtain optimum insect control when aerial applications are employed. Avoid applications under conditions when uniform coverage cannot be obtained or when spray drift may occur. Use no less than the minimum allowed gallons of spray solution per acre. Refer to **Crop-specific Application Instructions** table. For all crops, thorough coverage is required for optimum pest insect control. **DO NOT** apply when conditions favor drift from target area. **DO NOT** apply directly to humans or animals.

Sprinkler Irrigation System Application

Sefina may be applied using sprinkler irrigation systems on specific crops as noted in the **Crop-specific Application Instructions** table.

Application Through Sprinkler Irrigation Systems

This product can be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. **DO NOT** apply this product through any other type of irrigation system.

Add this product to the pesticide supply tank containing sufficient water to maintain a continuous flow by the injection equipment. In continuous moving systems, inject this product-water mixture continuously, applying the labeled rate per acre for that crop. **DO NOT** exceed 1/4 inch (6,788 gallons) per acre. In stationary or noncontinuous

moving systems, inject the product-water mixture in the last 15 to 30 minutes of each set allowing sufficient time for all of the required pesticide to be applied by all the sprinkler heads and applying the labeled rate per acre for that crop. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. Thorough coverage of foliage is required for good control. Maintain good agitation during the entire application period. If you have questions about calibration, you should contact a state extension service specialist, equipment manufacturers or other experts.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Specific Instructions for Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the

water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

Spray Drift Reduction Management

DO NOT apply when wind speed favors drift beyond the area intended for treatment. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator is responsible for considering these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

Importance of Droplet Size. An important factor influencing drift is droplet size. Small droplets (<150 to 200 microns) drift more than large droplets. Within typical equipment specifications, applications should be made to deliver the largest droplet spectrum that provides sufficient control and coverage. Use only medium or coarser spray nozzles (for ground and aerial applications) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Ground Applications. Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application. For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two (2) rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

Aerial Applications. The spray boom should be mounted on the aircraft to minimize drift caused by wing tip vortices. The minimum practical boom length should be used, and must not exceed 75% of the wing span or 80% rotor diameter. Flight speed and nozzle orientation must be considered in determining droplet size. Spray must be released at the lowest height consistent with pest control and flight safety. **DO NOT** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Wind Speed Restrictions. Drift potential increases at wind velocities of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Only apply this product if the wind direction favors on-target deposition. **DO NOT** apply when wind velocity exceeds 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Restrictions During Temperature Inversions. DO NOT make ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by stable air and increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by mist or ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source. Smoke that layers and moves laterally near the ground surface in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

Cleaning Spray Equipment

Before application, start with clean, well-maintained application equipment. Following spray application, thoroughly clean all application equipment. Drain application equipment of any excess product. Thoroughly rinse application equipment and flush hoses, boom, and nozzles with clean water. Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. **DO NOT** clean equipment near wells, water sources, or desirable vegetation.

Additives and Tank Mixing Information

Shake container well before use.

Sefina™ insecticide can be tank mixed with most recommended fungicides, insecticides, liquid fertilizers, adjuvants, and additives.

Under certain conditions or when recommended under the **Crop-specific Application Instructions**, adjuvants can improve the performance of **Sefina**. However, all varieties and cultivars have not been tested with the solo product or with all possible tank mix combinations. Local conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced pest control, or crop injury can result from mixing **Sefina** with other products.

Before using any tank mix (fungicides, insecticides, liquid fertilizers, adjuvants, and additives), test the combination on a small portion of the crop to be treated (including plant cultivars) to ensure that a phytotoxic response will not occur as a result of application. Always follow the most restrictive label use directions.

Evaluate for crop response 3 to 7 days before making an application to the entire crop.

When an adjuvant is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

Consult a BASF representative or local agricultural authorities for more information concerning additives.

Mixing Order

Make sure each component is thoroughly mixed and suspended before adding tank mix partners. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Maintain constant agitation during application.

Shake **Sefina** container well before use.

1. **Water** - Begin by filling a thoroughly clean sprayer tank 1/2 to 3/4 full of clean water.
2. **Agitation** - Maintain constant agitation throughout mixing and application.
3. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
4. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
5. **Water-soluble additives** (including dry and liquid fertilizers such as ammonium sulfate or urea ammonium nitrate).
6. **Water-dispersible products** (such as **Sefina**, dispersible concentrates, dry flowables, wettable powders, other suspension concentrates, or suspo-emulsions).
7. **Water-soluble products**
8. **Emulsifiable concentrates** (such as oil concentrates when applicable)
9. **Water-soluble additives** (such as AMS or UAN when applicable)
10. **Remaining quantity of water**

Crop-specific Information

Crop-specific Application Instructions

Crop	Pest	Product Use Rate per Application (fl ozs/A)	Minimum Time from Application to Harvest (PHI) days
Citrus fruits group Australian desert lime Australian finger lime Australian round lime Brown River finger lime Calamondin Citron Citrus hybrids Grapefruit Japanese summer grapefruit Kumquat Lemon Lime Lime, sweet Mediterranean mandarin Mount White lime New Guinea wild lime Orange, sour Orange, sweet Pummelo Russell River lime Satsuma mandarin Tachibana orange Tahiti lime Tangelo Tangerine (mandarin) Tangor Trifoliolate orange Uniq fruit Cultivars, varieties and/or hybrids of these	Asian citrus psyllid Citrus snow scale	14	0
	Aphids (including): Black citrus aphid Cotton/melon aphid Spirea aphid	3.0	
	Suppression of: California red scale Citricola scale	14	
<p>Citrus fruits group Restrictions: For maximum knockdown and residual control, apply Sefina™ insecticide at first sign of infestation, according to locally recommended thresholds.</p> <p>The addition of a tank-mixed adjuvant or horticultural oil can help to provide the most complete pest control.</p> <p>Minimum retreatment interval: 7 days.</p> <p>Minimum spray carrier volume (per acre): 50 gallons for ground; 10 gallons for air.</p> <p>Apply Sefina at spray volumes sufficient to ensure thorough crop coverage for optimal performance.</p> <p>Resistance Management. DO NOT make more than 2 sequential applications of Sefina before using an effective insecticide with a different mode of action.</p> <p>DO NOT apply more than 28 fl ozs of Sefina (0.09 lb afidopyropen ai) per acre per year.</p> <p>DO NOT use sprinkler irrigation to apply Sefina to citrus crops.</p>			

(continued)

Crop-specific Application Instructions *(continued)*

Crop	Pest	Product Use Rate per Application (fl ozs/A)	Minimum Time from Application to Harvest (PHI) days
Cotton	Silverleaf whitefly Sweetpotato whitefly	14	7
	Aphids (including): Cotton/melon aphid	3.0	

Cotton Restrictions: For maximum effectiveness, apply **Sefina™ insecticide** at the first sign of pest presence, and before the population increases to damaging levels. Application should be timed to coincide with locally recommended treatment threshold levels in developing pest populations.

Sefina is active against egg, early instar, and adult whitefly life stages.

Apply with sufficient water volume for proper coverage to ensure effective control. Use of an adjuvant for whitefly control may improve the performance of **Sefina**.

Minimum re-treatment interval: 7 days.

Minimum spray carrier volume (per acre): 10 gallons for ground; 2.0 gallons for air.

Resistance Management. DO NOT make more than 2 consecutive applications of **Sefina** before alternating to an effective insecticide with a different mode of action.

DO NOT apply more than 28 fl ozs of **Sefina** (0.09 lb afidopyropen ai) per acre per year.

(continued)

Crop-specific Application Instructions *(continued)*

Crop	Pest	Product Use Rate per Application (fl ozs/A)	Minimum Time from Application to Harvest (PHI) days
Cucurbit vegetables group	Greenhouse whitefly Silverleaf whitefly Sweetpotato whitefly	14	0
Chayote (fruit) Chinese waxgourd (Chinese preserving melon) Citron melon Cucumber Gherkin Pumpkin Watermelon Edible gourd Hyotan Chinese okra Cucuzza Momordica spp. Balsam apple Balsam pear Bitter melon Chinese cucumber Muskmelon Cantaloupe Casaba Crenshaw melon Golden pershaw melon Honeydew melon Honey balls Mango melon Persian melon Pineapple melon Santa Claus melon Snake melon True cantaloupe Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini) Squash, winter (includes acorn squash, butternut squash, calabaza, hubbard squash, spaghetti squash)	Aphids (including): Cotton/melon aphid	3.0	

(continued)

Crop-specific Application Instructions *(continued)*

Cucurbit vegetables group *(continued)*

Cucurbit vegetables group Restrictions: For maximum effectiveness, apply **Sefina™ insecticide** at the first sign of pest presence, and before the population increases to damaging levels. Application should be timed to coincide with locally recommended treatment threshold levels in developing pest populations.

Apply **Sefina** at spray volumes sufficient to ensure thorough crop coverage for optimal performance. Use of an adjuvant for whitefly control may improve the performance of **Sefina**.

Minimum spray carrier volume (per acre): 10 gallons for ground; 2 gallons for air.

Minimum retreatment interval: 7 days.

Resistance Management. DO NOT make more than 2 sequential applications of **Sefina** before using an effective insecticide with a different mode of action.

DO NOT apply more than 28 fl ozs of **Sefina** (0.09 lb afidopyropen ai) per acre per season.

Maximum crop seasons per year: 2.

(continued)

Crop-specific Application Instructions *(continued)*

Crop	Pest	Product Use Rate per Application (fl ozs/A)	Minimum Time from Application to Harvest (PHI) days
Fruiting vegetables group African eggplant Bush tomato Cocona Currant tomato Eggplant Garden huckleberry Goji berry Groundcherry Martynia Naranjilla Okra Pea eggplant Pepino Pepper, bell Pepper, nonbell Roselle Scarlet eggplant Sunberry Tomatillo Tomato Tree tomato Cultivars, varieties, and/or hybrids of these commodities	Greenhouse whitefly Silverleaf whitefly Sweetpotato whitefly	14	0
	Aphids (including): Green peach aphid Potato aphid	3.0	
<p>Fruiting vegetables group Restrictions: For maximum effectiveness, apply Sefina™ insecticide at the first sign of pest presence, and before the population increases to damaging levels. Application should be timed to coincide with locally recommended treatment threshold levels in developing pest populations.</p> <p>Apply Sefina at spray volumes sufficient to ensure thorough crop coverage for optimal performance. Use of an adjuvant for whitefly control may improve the performance of Sefina.</p> <p>Minimum spray carrier volume (per acre): 10 gallons for ground; 2 gallons for air.</p> <p>Minimum retreatment interval: 7 days.</p> <p>Resistance Management. DO NOT make more than 2 sequential applications of Sefina before using an effective insecticide with a different mode of action.</p> <p>DO NOT apply more than 28 fl ozs of Sefina (0.09 lb afidopyropen ai) per acre per season.</p> <p>Maximum crop seasons per year: 3.</p>			

(continued)

Crop-specific Application Instructions *(continued)*

Crop	Pest	Product Use Rate per Application (fl ozs/A)	Minimum Time from Application to Harvest (PHI) days
Soybean	Aphids (including): Soybean aphid	3.0	7
<p>Soybean Restrictions: For maximum knockdown and residual control, apply Sefina™ insecticide at first sign of aphid infestation, according to locally recommended thresholds.</p> <p>Minimum re-treatment interval: 7 days.</p> <p>Minimum spray carrier volume (per acre): 10 gallons for ground; 2.0 gallons for air.</p> <p>DO NOT apply more than 6 fl ozs of Sefina (0.02 lb afidopyropen ai) per acre per year.</p> <p>DO NOT feed or graze soybean hay or forage.</p>			

(continued)

Crop-specific Application Instructions *(continued)*

Crop	Pest	Product Use Rate per Application (fl ozs/A)	Minimum Time from Application to Harvest (PHI) days
<p>Tree nuts group</p> <p>African nut tree Almond Beechnut Brazil nut Brazilian pine Bunya Bur Oak Butternut Cajou nut Candlenut Cashew Chestnut Chinquapin Coconut Coquito nut Dika nut Ginkgo Guiana chestnut Hazelnut (Filbert) Heartnut Hickory nut Japanese horse-chestnut Macadamia nut Mongongo nut Monkey-pot Monkey puzzle nut Okari nut Pachira nut Peach palm nut Pecan Pequi Pili nut Pine nut Pistachio Sapucaia nut Tropical almond Walnut, black Walnut, English Yellowhorn</p> <p>Cultivars, varieties, and/or hybrids of these commodities</p>	<p>Aphids (including): Black margined aphid Black pecan aphid Yellow pecan aphid</p>	<p>3.0</p>	<p>7</p>

(continued)

Crop-specific Application Instructions *(continued)*

Tree nuts group *(continued)*

Tree nuts group Restrictions: For maximum knockdown and residual control, apply **Sefina™ insecticide** at first sign of infestation, according to locally recommended thresholds.

Apply **Sefina** at spray volumes sufficient to ensure thorough crop coverage for optimal performance.

Minimum spray carrier volume (per acre): 25 gallons for ground; 10 gallons for air.

Minimum retreatment interval: 7 days.

Resistance Management. DO NOT make more than 2 sequential applications of **Sefina** before using an effective insecticide with a different mode of action.

DO NOT apply more than 6 fl ozs of **Sefina** (0.02 lb afidopyropen ai) per acre per year.

DO NOT use sprinkler irrigation to apply **Sefina** to tree nut crops.

(continued)

Crop-specific Application Instructions *(continued)*

Crop	Pest	Product Use Rate per Application (fl ozs/A)	Minimum Time from Application to Harvest (PHI) days
Tuberous and corm vegetable subgroup Potato Arracacha Arrowroot Cassava (bitter and sweet) Chayote (root) Chinese artichoke Chufa Dasheen (taro) Ginger Jerusalem artichoke Leren Sweet potato Tanier True yam Turmeric Yam bean	Potato psyllid* Silverleaf whitefly Sweetpotato whitefly	14	7
	Aphids (including): Green peach aphid Potato aphid	3.0	
<p>Tuberous and corm vegetable subgroup Restrictions: For maximum knockdown and residual control, apply Sefina™ insecticide at first sign of infestation, according to locally recommended thresholds.</p> <p>Sefina is active against egg, early instar, and adult whitefly life stages.</p> <p>Minimum retreatment interval: 7 days.</p> <p>Minimum spray carrier volume (per acre): 10 gallons for ground; 2.0 gallons for air.</p> <p>Resistance Management. DO NOT make more than 2 sequential applications of Sefina before using an effective insecticide with a different mode of action.</p> <p>DO NOT apply more than 28 fl ozs of Sefina (0.09 lb afidopyropen ai) per acre per year.</p> <p>*Not approved for use on potato psyllid in California.</p>			

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1108

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