



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

August 26, 2025

Jordan Moseley  
Regulatory Affairs Manager  
AMVAC Chemical Corporation  
4695 MacArthur Court, Suite 1200  
Newport Beach, CA 92660

Subject: Label Amendment - Registration Review Mitigation for Bifenthrin  
Product Name: WISDOM FLOWABLE  
EPA Registration Number: 5481-519  
Case Number: N/A  
Application Date: March 24, 2021

Dear Jordan Moseley:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Bifenthrin Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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 Assurance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling and must be used at your next label printing. 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 12 months from the date of this letter. After 12 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.

If you have any questions about this letter, please contact Meaghan Robertson by phone at 202-566-0169, or via email at [robertson.meaghan@epa.gov](mailto:robertson.meaghan@epa.gov).

Sincerely,

A handwritten signature in blue ink that reads "Cathryn Britton". The signature is fluid and cursive, with the first name and last name clearly distinguishable.

Cathryn Britton  
Chief, Risk Management and Implementation  
Branch V  
Pesticide Re-evaluation Division (7508M)  
Office of Pesticide Programs

ENCLOSURE: Stamped label

**RESTRICTED USE PESTICIDE****Toxic to Fish and Aquatic Organisms**

For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

{Note to reviewer: Text in curly brackets { } indicate a note to the EPA reviewer and will not appear on the label. Text in brackets [ ] is optional, and may or may not appear on the end use label. Text in parentheses ( ) will appear on the end use label.}

BIFENTHRIN

GROUP

3A

INSECTICIDE

**WISDOM<sup>®</sup> FLOWABLE**

For use to control listed insect and mite pests in greenhouses and nurseries, as well as on golf courses and on ornamental and turf in landscaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas, golf courses, sod farms and athletic fields.

For both indoor and outdoor use

**ACTIVE INGREDIENT**

**Bifenthrin** (2 methyl [1,1'-biphenyl] 3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-

2,2-dimethyl-cyclopropanecarboxylate\* .....7.9%

**INERT INGREDIENTS** .....92.1%

**TOTAL** .....100.0%

\*Cis isomers 97% minimum, trans isomers 3% maximum.

Wisdom Flowable contains 2/3 pound active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION/PRECAUCIÓN**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
<b>If swallowed:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

**ACCEPTED****08/26/2025**

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

**5481-519**

## EMERGENCY INFORMATION

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

### FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY

For Medical Emergencies, phone:.....1-888-681-4261

For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC® .....1-800-424-9300

For Product Use Information phone: AMVAC® .....1-888-462-6822

## NOTE TO PHYSICIAN

This product is a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils or alcohol may increase absorption and so should be avoided.

See [inside] [side] [back] [panel] [booklet] [canister] [label] [attached] [to] [pouch] [bag] [seal] [pack] for [complete] [additional] [First Aid] [Precautionary Statements] [and] [Directions for Use] [and] [Storage and Disposal] [and] [Limited Warranty and Disclaimer].

EPA Reg. No. 5481-519

EPA Est. No. \_\_\_\_\_

Net Contents: \_\_\_\_\_



AMVAC Chemical Corporation  
4695 MacArthur Court, Suite 1200  
Newport Beach, CA 92660 USA  
1-888-462-6822

**MADE WITH PRIDE**



**IN THE USA**

[Made with Pride in the USA]

[Made in \_\_\_\_\_]

{Note for reviewer. Below is for QR code and pointer text placeholder}

[Scan for Spanish/Escanee para español

(PLACE QR CODE HERE)]

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**Caution:** Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing dust (vapor or spray mist). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using toilet. Remove and wash contaminated clothing before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and Other Handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride ≥ 14 mils, or Viton® ≥ 14 mils
- Shoes plus socks.

#### Mixers and Loaders must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride ≥ 14 mils, or Viton ≥ 14 mils

- Shoes plus socks.
- Protective eyewear.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### USER SAFETY RECOMMENDATIONS

Users should:

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

#### ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Care should be used when spraying to avoid fish and reptile pets in/around ornamental ponds.

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Rinsing application equipment over the treated area will help to avoid run off to water bodies or drainage systems.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow to drift to blooming crops if bees are visiting the treatment area. **Protect pollinating insects by following label directions intended to minimize drift and to reduce risk to these organisms.**

#### DIRECTIONS FOR USE

Restricted Use Pesticide

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

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.

For both indoor and outdoor use

All outdoor spray applications must be limited to spot or crack-and-crevice treatments only, except for application to pervious surfaces such as soil, lawn, turf, and other vegetation.

#### USE RESTRICTIONS

- Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).
- Do not apply the product into fish pools, ponds, streams, or lakes. Do not apply directly to sewers or storm drains, or to any area like a drain or gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur.
- Do not allow the product to enter any drain during or after application.
- Do not apply directly to impervious horizontal surfaces such as sidewalks, driveways, and patios except as a spot or crack and crevice treatment.
- Do not apply or irrigate to the point of runoff.
- Spot treatments must not exceed two square feet in size (for example, 2 ft by 1 ft or 4 ft by 0.5 ft)
- Do not make applications during rain.
- Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).
- Rainfall within 24 hours after application may cause unintended runoff of pesticide application.
- Do not apply this product through any kind of irrigation system.
- Do not apply by air.
- Apply with ground equipment only.
- Do not allow the product to enter indoor or outdoor drains./No permita la entrada a desagües internos o externos.

- Follow proper disposal procedures on this label./Siga las indicaciones del etiquetado para el desecho apropiado del producto.



See Special Restriction in the State of New York in the Application Recommendations section of this label). When treating tall trees (> 15 feet) from the ground with high pressure sprays or during any application with air assisted equipment (mist blower) do not apply within 150 feet of aquatic areas.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. 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 to 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.
- Chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride ≥ 14 mils, or Viton ≥ 14 mils.
- Shoes plus socks.

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses. Keep children and pets off treated areas following application until the lawn has dried.

### MANDATORY SPRAY DRIFT MANAGEMENT

#### Airblast Applications

- Sprays must be directed into the canopy.
- Do not apply when wind speeds exceed 15 mph at the application site.
- User must turn off outward point nozzles at row ends and when spraying outer row.
- Do not apply during temperature inversions.

#### Ground Boom 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 select nozzle and pressure that deliver medium or coarser droplets (ASABE S572).
- Do not apply when wind speeds exceed 15 mph 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.

#### **Boom Height - Ground Boom**

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

#### **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.

#### **Non-target organism Advisory Statement (Environmental Hazards):**

- This product is highly toxic to bees and other pollinating insects exposed to direct treatment or to residues in/on blooming crops or weeds. Protect pollinating insects by following label directions intended to minimize drift and to reduce risk to these organisms.

#### **HANDHELD TECHNOLOGY APPLICATIONS**

- Take precautions to minimize spray drift.

#### **VEGETATIVE FILTER STRIPS**

Construct and maintain a vegetative filter strip, according to the width specified below, of grass or other permanent vegetation between the field edge and nearby down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing bifenthrin onto fields where a maintained vegetative filter strip of at **least 25 feet** exists between the field edge and where a down gradient aquatic habitat exists. This minimum required width of 25 feet may be reduced or removed under the following conditions:

- For Western irrigated agriculture, a maintained vegetative filter strip of at least 10 feet wide is required. Western irrigated agriculture is defined as irrigated farmland in the following states: WA, OR, CA, ID, NV, UT, AZ, MT, WY, CO, NM, and TX (west of I-35).
  - For Western irrigated agriculture, if a sediment control basin is present, a vegetative filter strip is not required.
- In all other areas, a vegetative filter strip with a minimum width of 25 feet is required, unless the following conditions are met. The vegetative filter strip requirement may be reduced from 25 feet to 15 feet if at least one of the following applies:
  - The area of application is considered prime farmland (as defined in 7 CFR § 657.5).

- Conservation tillage is being implemented on the area of application. Conservation tillage is defined as any system that leaves at least 30% of the soil surface covered by residue after planting. Conservation tillage practices can include mulch-till, no-till, or strip-till.
- A functional terrace system is maintained on the area of application.
- Water and sediment control basins for the area of application are functional and maintained.
- The area of application is less than or equal to 10 acres.

For further guidance on vegetative filter strips, refer to the following publication for information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. <https://www.regulations.gov/document?D=EPA-HQ-OPP-2008-0331-0175>

## Pollinator Protection

Following best management practices can help reduce risk to terrestrial pollinators. Examples of best management practices include applying pesticides in the evening and at night when pollinators are not foraging and checking to confirm hive locations before spraying. For additional resources on pollinator best management practices, visit <https://www.epa.gov/pollinator-protection/find-best-managementpractices-protect-pollinators>

**Managed pollinator protection plans** are developed by states/tribes to promote communication between growers, landowners, farmers, beekeepers, pesticide users, and other pest management professionals to reduce exposure of bees to pesticides. If available, visit state plans for additional information on how to protect pollinators.

## How to Report Bee Kills

It is recommended that users contact both the state lead agency and the U.S. Environmental Protection Agency to report bee kills due to pesticide application. Bee kills can be reported to EPA at [beekill@epa.gov](mailto:beekill@epa.gov). To contact your state lead agency, see the current listing of state pesticide regulatory agencies at the National Pesticide Information Center's website: [http://npic.orst.edu/reg/state\\_agencies.html](http://npic.orst.edu/reg/state_agencies.html)

## Resistance Management

For resistance management, Wisdom Flowable contains bifenthrin, a Group 3 insecticide. Any insect population may contain individuals naturally resistant to Wisdom Flowable and other Group 3 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same locations. Appropriate resistance management strategies should be followed.

To delay insecticide resistance, take one or more of the following steps:

- Rotate the use of Wisdom Flowable or other Group 3 insecticides within the year with different groups that control the same pests.
- 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 the mixture. In addition, consider the following recommendations from the Insect 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 pests.
  - 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 greater 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 insect management program for insecticide use that includes scouting, uses historical information related to pesticide use 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 pest control advisor for any additional pesticide resistance-management and/or IPM recommendations for specific site and pest problems in your area.

For further information or to report suspected resistance contact AMVAC at (1-888-462-6822). You can also contact your pesticide distributor or university extension specialist to report resistance.

## APPLICATION INSTRUCTIONS

Wisdom Flowable formulation mixes readily with water and other aqueous carriers, and controls listed insects and mites on ornamentals, trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in greenhouses and interiorscapes including hotels, shopping malls, office buildings, etc., and, outdoor plantscapes, such as around residential dwellings, parks, institutional, public, commercial and industrial buildings, recreational, athletic fields, home lawns, golf courses and sod farms. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.

Wisdom Flowable may be tank-mixed with other products, including insect growth regulators. When tank mixing Wisdom Flowable with other products, observe all precautions and limitations on each separate product label. The physical compatibility of Wisdom Flowable may vary with different sources of pesticide products and local cultural practices. Any tank mixtures which have not been previously tested should be prepared on a small scale (pint or quart jar) using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture.

The following procedure is recommended for preparation of a new tank mix, unless specified otherwise in label directions: (1) Add wettable powders to tank water, (2) Agitate, (3) Add liquids and flowables, (4) Agitate, (5) Add emulsifiable concentrates, and (6) Agitate. If a mixture is found to be incompatible following this order of addition, try reversing the order of addition, or increase the volume of water. Note: If the tank mixture is found to be compatible after increasing the amount of water, then the sprayer will need to be recalibrated for a higher volume application. Do not allow tank mix to stand overnight.

**Maximum rates (Except Nursery)** Do not apply more than 0.1 lb bifenthrin/acre (20 fl oz Wisdom Flowable) in a single application, no more than 0.2 lb bifenthrin/acre/year (40 fl oz Wisdom Flowable) for outdoor applications.

Note: For large infestations of ants, imported fire ants, and mole crickets, a single application of 0.2 lb bifenthrin/acre (40 fl oz Wisdom Flowable) may be applied once per year.

### New York State Restrictions

#### NOT FOR USE ON SOD FARMS IN THE STATE OF NEW YORK.

In New York State, this product may not be applied to turf within 100 feet of a coastal marsh (or of a water body [lake, pond, river, stream, wetland, or drainage ditch]).

In New York State, do make a single repeat application of this product if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

**Applications: Landscape Ornamentals, Greenhouses, Nurseries, Sod Farms, Golf Courses and Home Lawn Uses (Including Interiorscapes, Plantscapes, and Ornamental Plantings Grown for Aesthetic Purpose).**

### APPLICATION RATES FOR LANDSCAPE ORNAMENTALS AND GREENHOUSES

Pest	Rate lb ai/10 Gallons	Rate oz/10 Gallons	Comments
Ants Aphids Bagworms Blackvine Weevil Brown Soft Scales Broad Mites Budworms California Red Scale (Crawlers)	0.004 to 0.02	0.80 to 4.0	Apply the specified rate of Wisdom Flowable as a full coverage foliar spray. Repeat as necessary to achieve control using higher rates as pest pressure and foliage area increases.  To control Bagworm: Apply when larvae begin to hatch. Spray larvae directly. Applications made when larvae are young will be most

Centipedes Clover Mites Crickets Cutworms Earwigs Elm Leaf Beetles Fall Webworms Flea Beetles Fungus Gnats Grasshoppers Lacebugs Leafhoppers Leaf Feeding Caterpillars Mealybugs Millipedes Orchid Weevil Pillbugs Pine Needle Scales (crawlers) Plant Bugs (incl. Lygus spp.) San Jose Scales (crawlers) Sowbugs Spiders Tent Caterpillars Tip Moths Weevils Whiteflies			<p>effective.</p> <p>To control scale crawlers and twig borers: Treat trunks, stems, and twigs in addition to plant foliage.</p> <p>Certain cultivars may be sensitive to the final spray solution. A small number of plants should be treated prior to application of the entire planting.</p> <p>Use of an alternate class of chemistry in a treatment program is recommended to prevent or delay pest resistance.</p>
European Crane Flies	0.005	1.0	
Citrus Thrips Beet Armyworm European Red Mite Leafrollers Spider Mites Thrips Twig Borers	0.006 to 0.02	1.2 to 4.0	
Japanese Beetles (adult) Leafminers Pecan Leaf Scorch Mite	0.01 to 0.02	2.0 to 4.0	

**Maximum Nursery Rates** Do not apply more than 0.2 lb ai/acre (40 fl oz of Wisdom Flowable) in a single application or per year for outdoor applications.

### Nursery Dilution Chart

Application Volume	Application Rate	Fluid Ounces* of Wisdom Flowable Diluted to these Volumes of Finished Spray			
		1 Gallon	25 Gallons	50 Gallons	100 Gallons
50	0.025	0.1	2.5	5.0	10.0
50	0.05	0.2	5.0	10.0	20.0
50	0.1	0.4	10.0	20.0	40.0
50	0.2	0.8	20.0	40.0	80.0
100	0.025	0.05	1.25	2.5	5.0
100	0.05	0.1	2.5	5.0	10.0
100	0.1	0.2	5.0	10.0	20.0
100	0.2	0.4	10.0	20.0	40.0
150	0.025	0.03	0.83	1.67	3.3
150	0.05	0.07	1.67	3.33	6.7
150	0.1	0.133	3.33	6.67	13.3
150	0.2	0.266	6.67	13.33	26.7

200	0.025	0.025	0.63	1.25	2.5
200	0.05	0.05	1.25	2.5	5.0
200	0.1	0.1	2.5	5.0	10.0
200	0.2	0.2	5.0	10.0	20.0
250	0.025	--	0.5	1.0	2.0
250	0.05	--	1.0	2.0	4.0
250	0.1	--	2.0	4.0	8.0
250	0.2	--	4.0	8.0	16.0
300	0.025	--	0.42	0.83	1.7
300	0.05	--	0.83	1.67	3.3
300	0.1	--	1.67	3.33	6.7
300	0.2	--	3.33	6.67	13.3

\*To convert to milliliters, multiply by 29.57.

1 fl. oz. = 29.57 ml = 2 tablespoons = 6 teaspoons.

Do not use household utensils to measure Wisdom Flowable.

Formula for Determining the Active Ingredient Content of the Finished Spray Mixture: The following formula may be used to determine the percent active ingredient that is in the spray tank after mixing Wisdom Flowable.

$$\frac{(7.9)(\text{fl oz of Wisdom Flowable added to tank})}{(\text{Gallons of finished spray mix})(128)} = \text{Percent active ingredient of spray}$$

### Turf Dilution Chart

Application Volume	Application Rate	Fluid Ounces* of Wisdom Flowable Diluted to these Volumes of Finished Spray				
		1 Gallon	10 Gallons	25 Gallons	50 Gallons	100 Gallons
0.5	0.05	0.5	5.0	12.5	25.0	50.0
0.5	0.1	1.0	10.0	25.0	50.0	100.0
0.5	0.2	2.0	20.0	50.0	100.0	200.0
0.75	0.05	0.33	3.33	8.33	16.67	33.33
0.75	0.1	0.67	6.67	16.67	33.33	66.67
0.75	0.2	1.33	13.33	33.33	66.67	133.33
1	0.05	0.25	2.5	6.25	12.5	25.0
1	0.1	0.5	5.0	12.5	25.0	50.0
1	0.2	1.0	10.0	25.0	50.0	100.0
1.5	0.05	0.17	1.67	4.17	8.33	16.67
1.5	0.1	0.33	3.33	8.33	16.67	33.33
1.5	0.2	0.67	6.67	16.67	33.33	66.67
2	0.05	0.13	1.25	3.13	6.25	12.5
2	0.1	0.25	2.5	6.25	12.5	25.0
2	0.2	0.5	5.0	12.5	25.0	50.0
2.3 <sup>a</sup>	0.05	0.11	1.09	2.72	5.43	10.87
2.3 <sup>a</sup>	0.1	0.22	2.17	5.43	10.87	21.74
2.3 <sup>a</sup>	0.2	0.43	4.35	10.87	21.74	43.48
3	0.05	--	0.83	2.09	4.17	8.33
3	0.1	0.17	1.66	4.17	8.33	16.67
3	0.2	0.33	3.33	8.33	16.67	33.33
4	0.05	--	0.63	1.56	3.13	6.25
4	0.1	0.13	1.25	3.13	6.25	12.5
4	0.2	0.25	2.5	6.25	12.5	25.0

\*To convert to milliliters, multiply by 29.57.

<sup>a</sup> 100 gallons per acre.

1 fl oz = 29.57 ml = 2 tablespoons = 6 teaspoons

Do not use household utensils to measure Wisdom Flowable.

**Applications: Grass Areas (including golf courses, sod farms, home lawns, lawn areas around parks, institutional, public, commercial and industrial buildings, recreational and athletic fields).**

Apply Wisdom Flowable as a surface or sub-surface treatment. Use application volumes of up to 10 gallons per 1000 square feet to get uniform coverage when treating dense and/or long grass foliage.

For low volume applications, less than 2 gallons/1000 square feet, immediately irrigate treated area with at least 0.25 inches of water following application to ensure efficacy of sub-surface pests including mole crickets.

**Application to Home Lawns** Apply Wisdom Flowable as a broadcast treatment in 2 to 10 gallons of carrier per 1,000 square feet. Use higher volumes to get uniform coverage when treating dense grass foliage.

#### TURF APPLICATION RATES

Pest	Wisdom Flowable	Comments
Annual Bluegrass Weevil (adult) Ants Armyworms Bluegrass Billbugs Chinch bugs Crane Flies Crickets (Mole)* Cutworms Earwigs Fall Webworms Fleas Grasshoppers Mites Sod Webworms Ticks	0.23 to 0.46 oz per 1,000 sq ft  -or-  10 to 20 oz per Acre (0.05 to 0.1 lb bifenthrin per acre)	*For control of over-wintered Mole Crickets apply Wisdom Flowable at the lower rate early Spring. For the control of adult Mole Crickets in late-Summer or early Fall apply the higher rate.  To enhance control a non-ionic surfactant or a silicon based surfactant (0.25% w/v) may be applied as a tank-mix for the control of late Summer or Fall Adult Mole Crickets. For best results irrigate immediately after application with a minimum of 0.25 inches of water.
Imported Fire Ants Japanese Beetles (adult)	0.46 to 0.92 oz per 1,000 sq ft  -or-  20 to 40 oz per Acre (0.1 to 0.2 lb bifenthrin per acre)	

#### Imported Fire Ant Quarantine Treatment

Against Imported Fire Ants (IFA) in Potting Media (including balled and containerized nursery grown ornamental trees, shrubs, plants, flowers, conifers, bushes, Christmas trees, and non-bearing fruit and nut trees). Wisdom Flowable is approved and can be used in accordance with the USDA Imported Fire Ant Quarantine Program. Wisdom Flowable may be applied either soil incorporated, as a topical application, or as a high volume drench treatment.

**Soil Incorporation** Incorporate the appropriate volume of Wisdom Flowable (see table below) per cubic yard of potting media by diluting it in water (typically 1 quart to 1 gallon per cubic yard of media) and sprinkling or spraying it onto the media. The applications are based on the dry bulk density of the potting media. When used in accordance with USDA guidelines, this application will provide a 6 month certification period.

Rate Wisdom Flowable in oz (lb AI)/10 gal	Wisdom Flowable/Gallons of Finished Spray				
	1 Gallon	3 Gallons	5 Gallons	25 Gallons	100 Gallons
0.80 (0.004)		1/4	1/2	2	8
1.20 (0.006)	1/8	1/3	2/3	3	12
2.0 (0.010)	1/4	2/3	1	5	20

4.0 (0.020)	1/2	1 1/3	2	10	40
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#### Soil Incorporation Rate of Wisdom Flowable for Control of IFA in Potting Media

Potting Media Bulk Density (lb cubic yard)	Fluid Ounces of Wisdom Flowable in one cubic yard
200	1.9
400	3.8
600	5.7
800	7.6
1000	9.5
1200	11.4
1400	13.3

Use proportional amounts of Wisdom Flowable for potting media with bulk densities not listed.

**Topical Application:** Mix Wisdom Flowable in 1,000 ounces of water based on container size and bulk density of the potting media (see table below). Apply one (1) ounce of the mix to each container evenly distributed over the surface of the potting media. Irrigate all treated containers with 1.5 inches of water following application. When used in accordance with USDA guidelines, this application will provide a 6 month certification period.

#### Topical Drench Application Rates of Wisdom Flowable for Control of IFA in Potting Media

Potting Media Bulk Density (lb cubic yard)	Fluid Ounces of Wisdom Flowable Per 1,000 ounces of water	
	3 qt Container	4 qt Container
200	3.6	5.2
400	7.2	10.4
600	10.8	15.6
800	14.4	20.8
1000	18.0	26.0
1200	21.6	31.2
1400	25.2	36.4

Use proportional amounts of Wisdom Flowable for potting media with bulk densities not listed.

**High Volume Drench** Apply Wisdom Flowable as a high volume drench by mixing the appropriate amount of product based on the bulk density in 100 gallons of water (see table below). Apply mix to individual containers to the point of saturation. The amount of mix used for each plant is generally 1/5 the volume of the container. When used in accordance with USDA guidelines, this application will provide a 6 month certification period.

#### High Drench Application Rate of Wisdom Flowable for Control of IFA in Potting Media

Potting Media Bulk Density (lb cubic yard)	Fluid Ounces of Wisdom Flowable in 100 Gallons
200	2.4
400	4.8
600	7.2
800	9.6
1000	12.0
1200	14.4
1400	16.8

Use proportional amounts of Wisdom Flowable for potting media with bulk densities not listed.

#### Larval Control In Potting Media of Containerized Plants

**Black Vine Weevil Larval Control – Preventative Treatment – Topical Drench** For preventative control of black vine weevil larvae in containerized plants, dilute Wisdom Flowable at the rate of 10 to 40 fl oz (0.05 to 0.2 lb AI) per 100 gallons and

apply as a drench at the rate of 4 to 8 fl oz of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container. Diluting 10 fl oz of Wisdom Flowable per 100 gallons and applying 8 fl oz of finished spray per 6 inch (diameter) container will provide black vine weevil larval control for one growing season when the application is made in the spring. Diluting 20 to 40 fl oz of Wisdom Flowable per 100 gallons and applying 8 fl oz of finished spray per 6 inch (diameter) container will provide black vine weevil larval control for two growing seasons when the application is made in the spring.

**White Grub Control – Preventative Treatment – Topical Drench** For preventative control of white grubs (including Japanese beetle, oriental beetle and European chafer) in containerized plants, dilute Wisdom Flowable at the rate of 40 to 80 fl oz (0.2 to 0.4 lb AI) per 100 gallons and apply as a drench at the rate of 4 to 8 fl oz of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container. Use the higher application rate for a longer period of control.

**Black Vine Weevil and White Grub Larval Control – Preventative Treatment – Media Incorporation** For preventative control of black vine weevil and white grub larvae in containerized plants, incorporate the appropriate volume of Wisdom Flowable (see table below) per cubic yard of potting media by diluting it in water (typically 1 quart to 1 gallon per cubic yard of media) and sprinkling or spraying it onto the media. Use the higher application rates for longer periods of control.

Potting Media Bulk Density (lb per cubic yard)	Fluid Ounces of Wisdom Flowable in one cubic yard			
	10 PPM	15 PPM	20 PPM	25 PPM
200	0.4	0.6	0.8	1.0
300	0.6	0.9	1.2	1.5
400	0.8	1.2	1.6	2.0
500	1.0	1.5	2.0	2.5
600	1.2	1.8	2.4	3.0
700	1.4	2.1	2.8	3.5
800	1.6	2.4	3.2	4.0
900	1.8	2.7	3.6	4.5
1000	2.0	3.0	4.0	5.0

The application rates listed above are based on the dry bulk density of the potting media. Use proportional volumes of Wisdom Flowable for potting media with dry bulk densities that are not listed above.

**Black Vine Weevil Larval Control – Curative Treatment – Topical Drench** To control black vine weevil larvae infesting containerized plants, dilute Wisdom Flowable at the rate of 10 to 40 fl. ozs. (0.05 to 0.2 lb AI) per 100 gallons and apply as a drench at the rate of 8 to 16 fl oz of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.

**Bare-root Treatment of Preventative Root Weevil Larval Control** To protect treated roots of field grown nursery stock from feeding by rootweevil larvae, dilute one gallon of Wisdom Flowable in 100 gallons of water and treat the bare roots of plants that are being transplanted into the field either by dipping the roots into the insecticide solution for ten seconds or by spraying the insecticide solution onto the roots.

**Diaprepes Weevil Larval Control – Curative Treatment – Topical Drench** To control *Diaprepes* weevil larvae infesting containerized plants, dilute Wisdom Flowable at the rate of 10 to 40 fl. ozs. (0.05 to 0.2 lb AI) per 100 gallons and apply as a drench at the rate of 8 to 16 fl oz of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.

**Fungus Gnat Larval Control – Preventative Treatment – Topical Drench** For preventative control of fungus gnat larvae in containerized plants, dilute Wisdom Flowable at the rate of 20 to 40 fl oz (0.1 to 0.2 lb AI) per 100 gallons and apply as a drench at the rate of 4 to 8 fl. ozs. of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container. Use the higher application rate for a longer period of control.

**Fungus Gnat Larval Control – Curative Treatment – Topical Drench** To control fungus gnat larvae infesting containerized plants, dilute Wisdom Flowable at the rate of 10 to 40 fl. ozs. (0.05 to 0.2 lb AI) per 100 gallons and apply as a drench at the rate of 8 to 16 fl oz of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not pour or dispose down-the-drain or sewer. Call your local solid waste agency for local disposal options.

**PESTICIDE STORAGE** Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers.

**In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call AMVAC 1-888-462-6822.**

**To confine spill** If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

**PESTICIDE DISPOSAL** Pesticide wastes are toxic. Do not contaminate water, food or feed by storage or disposal. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. Dispose of excess or waste pesticide by use according to label directions, or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) 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 ¼ 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 or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label and; (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

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