

Specimen Label

SULFOXAFLOR	GROUP	4C	INSECTICIDE
BIFENTHRIN	GROUP	3A	INSECTICIDE



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Active Ingredient:

sulfoxaflor	3.7%
bifenthrin	11.2%
Other Ingredients	85.1%
Total	100%

Contains petroleum distillates.

Contains 0.31 lb active ingredient sulfoxaflor and 0.93 lb active ingredient bifenthrin per gallon.

Precautionary Statements

Hazard to Humans and Domestic Animals

EPA Reg. No. 62719-749

Keep Out of Reach of Children WARNING AVISO

May be fatal if swallowed. Causes moderate eye irritation.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Avoid contact with eyes or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes and socks

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.

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.
- Users should 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. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make

applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

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 it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Protect pollinating insects by following label directions intended to minimize drift and to reduce risk to these organisms.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

Directions for Use

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

This product must be used in accordance with the directions for use on this label, or exemptions under FIFRA (FIFRA Section 18 exemptions, FIFRA 2(ee) Bulletins).

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. Read all Directions for Use carefully before applying.

Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 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
- Shoes plus socks
- Chemical-resistant gloves, such as barrier laminate or nitrile rubber or neoprene rubber or Viton.

Storage and Disposal

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

Pesticide Storage: Store in original container only.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Nonrefillable rigid containers 5 gallons or less:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable nonrigid containers:

Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Storage and Disposal (Cont.)

Refillable rigid containers larger than 5 gal:

Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable rigid containers larger than 5 gal:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

- 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, you may contact your company representative by calling 800-258-3033.

Mixing Directions

Application Rate Reference Table

Application Rate of Ridgeback (fl oz/acre)	Total Active Ingredient Equivalent (lb ai/acre)	Sulfoxaflor lb ai/acre	Bifenthrin lb ai/acre
2.5	0.024	0.006	0.018
5	0.048	0.012	0.036
10	0.097	0.024	0.073
15	0.145	0.036	0.109
20	0.194	0.048	0.145
25	0.242	0.061	0.181
30	0.291	0.073	0.218

Ridgeback – Alone

Fill the spray tank with water to about 1/2 of the required spray volume. Start agitation and add the required amount of Ridgeback. Continue agitation while mixing and filling the spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray mix. Do not allow water or spray mixture to back-siphon into the water source.

Ridgeback - Tank Mix

Ridgeback is believed to be compatible with most commonly used agricultural fungicides, insecticides, growth regulators, foliar fertilizers and spray adjuvants. However, whenever preparing a new tank mix, always conduct a compatibility test by mixing proportional amounts of all spray ingredients in a test vessel (jar). Shake the mixture vigorously and allow it to stand for 15 minutes. Rapid precipitation of the ingredients and failure to re-suspend when shaken indicates that the mixture is incompatible and should not be applied.

Mixing Order for Tank Mixes: Fill the spray tank with water to about 1/2 of the required spray volume. Start agitation. Add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

Add different formulation types in the following order:

1. Water dispersible granules
2. Wettable powders
3. Ridgeback and other aqueous suspensions

Maintain agitation and fill spray tank to 3/4 of total spray volume. Then add:

4. Emulsifiable concentrates and water-based solutions
5. Spray adjuvants, surfactants and oils
6. Foliar fertilizers

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose.

Premixing: Dry and flowable formulations may be premixed with water (slurried) and added to the spray tank through a 20 to 35 mesh screen. This procedure assures good initial dispersion of these formulation types.

Application Directions

Not for Residential Use

Do not apply Ridgeback in greenhouses or other enclosed structures.

Proper application techniques help ensure thorough spray coverage and correct dosage for optimum insect control. Apply Ridgeback as a foliar spray at the rate indicated for target pest. The following directions are provided for ground and aerial application of Ridgeback. Attention should be given to sprayer speed and calibration, wind speed, and foliar canopy to ensure adequate spray coverage.

Product Information

Use Precautions

INSECTICIDE RESISTANCE MANAGEMENT

For resistance management, please note that Ridgeback contains both a Group 4C (sulfoxaflor) and Group 3A (bifenthrin) insecticide. Any insect/mite population may contain individuals naturally resistant to Ridgeback and other Group 4C and Group 3A insecticides. The resistant individuals may dominate the insect population if these insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of Ridgeback or other Group 4C and Group 3A insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides/acaricides 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):
 - o 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.
 - o Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
 - o When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
 - o Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
 - o 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.

Mandatory Spray Drift Management

Aerial Applications:

- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to select nozzle and pressure that deliver medium or coarser droplets (ASABE S641).
- Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- If the windspeed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversions.

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 pointing 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.

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 reduce pesticide risk to these organisms.

Handheld Technology Applications:

- Take precautions to minimize spray drift.

Spray Adjuvants

The addition of agricultural adjuvants to sprays of Ridgeback may improve initial spray deposits, redistribution and weatherability. Select adjuvants that are recommended and registered for your specific use pattern and follow their use directions. When an adjuvant is to be used with this product, it is recommended to use a Chemical Producers and Distributors Association certified adjuvant. Always add adjuvants last in the mixing process.

Chemigation Application – Potatoes Only

Ridgeback may be applied through properly equipped chemigation systems for insect control in potatoes. Do not apply Ridgeback by chemigation to other crops unless otherwise specified by a state-specific 24(c) label.

Use Directions for Chemigation: Ridgeback may be applied through overhead sprinkler irrigation systems that will apply water uniformly, including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, micro sprinkler, or hand move. Do not apply this product through any other type of irrigation system. Sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units are not recommended.

For continuously moving systems, the mixture containing Ridgeback must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 0.25 inch of water. For irrigation systems that do not move during operation, apply in no more than 0.25 inch of irrigation immediately before the end of the irrigation cycle.

Chemigation Preparation: The following use directions are to be followed when this product is applied through irrigation systems. Thoroughly clean the chemigation system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injection system with soap or a cleaning agent and water. Determine the amount of Ridgeback needed to cover the desired acreage. Mix according to instructions in the Mixing Directions section above. Continually agitate the mixture during mixing and application.

Chemigation Equipment Calibration: In order to calibrate the irrigation system and injector to apply the mixture containing Ridgeback, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Calculate the amount of product required and premix; 3) Determine the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 4) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of insecticide mixture needed by the number of minutes (minus time to flush out) to cover the treatment area. This value equals the gallons per minute output that the injector or eductor must deliver. Convert the gallons per minute to milliliters or ounces per minute if needed. Calibrate the injector system with the system in operation at the desired irrigation rate. It is suggested that the injection pump/system be calibrated at least twice before operation, and the system should be monitored during operation.

Chemigation Operation: Start the water pump and irrigation system, and let the system achieve the desired pressure and speed before starting the injector. Check for leaks and uniformity and make repairs before any chemigation takes place. Start the injection system and calibrate according to manufacturer's specifications. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injection system to be thoroughly flushed clean before stopping the system.

Chemigation Restrictions:

- Lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact state extension service specialists, equipment manufacturers or other experts.

Spray Drift Advisories

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

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

Controlling Droplet Size – Ground Boom

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

Controlling Droplet Size – Aircraft

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

BOOM HEIGHT – Ground Boom

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

RELEASE HEIGHT – Aircraft

- Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

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

TEMPERATURE AND HUMIDITY

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

TEMPERATURE INVERSIONS

- Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally

- Do not connect an irrigation system used for pesticide application (including greenhouse systems) to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place with current certification. Specific local regulations may apply and must be followed.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall operate the system and make necessary adjustments should the need arise and continuously monitor the injection.
- Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application if they irrigate nontarget areas.
- Do not allow irrigation water to collect or run off and pose a hazard to livestock, wells, or adjoining crops.
- Do not enter treated area during the reentry interval specified in the Agricultural Use Requirements section of this label unless required PPE is worn.
- Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.
- 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 vegetated 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>.

Ground Application

- 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).

Ultra Low Volume (ULV) Aerial Application

- Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds). Applications made by mosquito control districts and other public health officials are exempt from this requirement.

Non-ULV Aerial Application

- Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

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-management-practices-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. To contract 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.

Rotational Crop Restrictions

The following rotational crops may be planted at intervals defined below following the final application of Ridgeback at specified rates for a registered use.

Crop	Re-Planting Interval
Brassica head and stem vegetables (crop group 5–16), canola (rapeseed) (subgroup 20A), corn (field, pop, and sweet) including grown for seed, cotton, cucurbit vegetables (crop group 9), fruiting vegetables (crop group 8), okra, potatoes, soybean, succulent, edible podded and dry beans, tomato, tree nuts, turfgrass	no restrictions
all other crops grown for food or feed	30 days

Use Directions

Canola (Rapeseed) (Subgroup 20A)¹

¹Canola (rapeseed) (subgroup 20A) including borage, canola, crambe, cuphea, echium, flax seed, gold of pleasure, hare's ear mustard, lesquerella, lunaria, meadowfoam, milkweed, mustard seed, oil radish, poppy seed, rapeseed, sesame, sweet rocket cultivars, varieties and/or hybrids of these

Chemigation Specific Equipment Requirements:

- The system must contain an air gap or approved backflow prevention device, or approved functional check valve, vacuum relief valve (including inspection port), and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information or state specific regulations.
- The pesticide injection line must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection chemical supply.
- A pesticide injection pump must also contain a functional interlock, e.g., mechanical or electrical to shut off chemical supply 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 when the water pressure drops too low or water flow stops.
- Use of public water supply requires approval of a backflow prevention device or air gap (preferred) by both state and local authorities.
- Systems must use a metering device, such as a positive displacement injection pump (or flow meter on eductor) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. An electric powered pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70.
- To insure uniform mixing of the insecticide in the water line, inject the mixture in the center of the pipe diameter or just ahead of an elbow or tee in the irrigation line so that the turbulence created at those points will assist in mixing. The injection point must be located after all backflow prevention devices on the water line.
- The tank holding the insecticide mixture should be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injection point.

Buffer Zones

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).

Pests and Application Rates:

Pests	Ridgeback (fl oz/acre)
Aphids Armyworms Cutworms Diamondback Moth Flea Beetle Flea Hopper Grasshoppers Loopers Plant Bugs Seedpod Weevil Stink Bugs Thrips Whitefly	4.5 – 5.5 (0.033-0.04 lb ai/acre bifenthrin and 0.011-0.013 lb ai/acre sulfoxaflor)

Application Timing: Treat in accordance with local economic thresholds. Consult your Corteva Agriscience representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

- **Preharvest Interval:** Do not apply within 35 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per year.
- Do not apply more than a total of 11.0 fl oz of Ridgeback (0.08 lb ai of bifenthrin and 0.027 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

**Corn (Field, Pop, and Sweet) including Grown for Seed*
*For Foliar Use Only**

Pests and Application Rates:

Pests	Ridgeback (fl oz/acre)
Aphids Army Cutworm Aster Leafhopper Beet Armyworm Cereal Leaf Beetle Chinch Bug Common Stalk Borer Corn Earworm Corn Rootworm (Adults) Corn Silkfly Cucumber Beetle (Adults) Cutworm Species European Corn Borer Fall Armyworm Flea Beetle Grasshoppers Greenbug Japanese Beetle (Adults) Leafhoppers Sap Beetles Southern Armyworm Southern Corn Leaf Beetle Southwestern Corn Borer Stink Bugs Tarnished Plant Bug Thrips True Armyworm or Armyworm Species Webworms Western Bean Cutworm Yellowstriped Armyworm	4.5 – 13.8 (0.033-0.1 lb ai/acre bifenthrin and 0.011-0.033 lb ai/acre sulfoxaflor)
Banks Grass Mite Carmine Mite Pacific Spider Mite Twospotted Spider Mite	11.0 – 13.8 0.08-0.1 lb ai/acre bifenthrin and 0.027-0.033 lb ai/acre sulfoxaflor)
Brown Marmorated Stink Bug	13.8 (0.1 lb ai/acre bifenthrin and 0.033 lb ai/acre sulfoxaflor)

Application Timing: Treat in accordance with local economic thresholds. Consult your Corteva Agriscience representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

Field Corn, Seed Corn, Popcorn

- **Preharvest Interval:** Do not apply within 30 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not graze livestock in treated areas or cut treated crops for feed within 30 days of the last application.
- Use of ultra low volume (ULV) application on corn is prohibited.
- Do not make aerial or ground applications to corn if heavy rainfall is imminent.
- Do not make more than two applications per year.
- Do not apply more than a total of 27.6 fl oz of Ridgeback (0.2 lb ai of bifenthrin and 0.067 lb ai of sulfoxaflor) per acre per year.
- Do not apply product 3 days before bloom or until after seed set.

Sweet Corn (including grown for seed)

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per year.
- Do not graze livestock in treated areas or cut treated crops for feed within 1 day of the last application.
- Use of ultra low volume (ULV) application on corn is prohibited.
- Do not make aerial or ground applications to corn if heavy rainfall is imminent.
- Do not apply more than a total of 27.6 fl oz of Ridgeback (0.2 lb ai of bifenthrin and 0.067 lb ai of sulfoxaflor) per acre per year.

Cucurbit Vegetables (Crop Group 9)¹

¹Cucurbit vegetables (crop group 9) including balsam apple, balsam pear, bitter melon, cantaloupe, casaba, chayote, Chinese cucumber, Chinese okra, crenshaw melon, crookneck squash, cucumber, cucuzza, edible gourds, golden pershaw melon, hechima, honey balls, honeydew melon, hyotan, mango melon, Persian melon, pineapple melon, pumpkin, Santa Claus melon, scallop squash, snake melon, spaghetti squash, straightneck squash, summer squash, true cantaloupe, vegetable marrow, watermelon, winter squash, and other varieties and/or hybrids of these commodities.

Pests and Application Rates:

Pests	Ridgeback (fl oz/acre)
Aphids Armyworms Cabbage Looper Corn Earworm Cucumber Beetles Cutworms Grasshoppers Leafhoppers Melonworm Pickleworm Plant Bugs Rindworm Squash Bug Squash Vine Borer Stink Bugs Tobacco Budworm	5.5 – 13.8 (0.04-0.1 lb ai/acre bifenthrin and 0.013-0.033 lb ai/acre sulfoxaflor)
Banks Grass Mite Carmine Mite Lygus spp. Silverleaf Whitefly Sweetpotato Whitefly Twospotted Spider Mite Whitefly	11.0 – 13.8 (0.08-0.1 lb ai/acre bifenthrin and 0.027-0.033 lb ai/acre sulfoxaflor)
Brown Marmorated Stink Bug	13.8 (0.1 lb ai/acre bifenthrin and 0.033 lb ai/acre sulfoxaflor)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., 2 hours prior to sunset or when the temperature is below 50°F at the site of application, will minimize risk to bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Corteva Agriscience representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for control of whiteflies

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

- **Preharvest Interval:** Do not apply within 3 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not make more than two applications after bloom.
- Do not apply more than a total of 41.3 fl oz of Ridgeback (0.3 lb ai of bifenthrin and 0.1 lb ai of sulfoxaflor) per acre per year.

Fruiting Vegetables (Crop Group 8)¹, except tomato, and Okra

¹Fruiting vegetables (crop group 8) including bell pepper, eggplant, groundcherry, pimento, sweet pepper, tomatillo.

Pests and Application Rates:

Pests	Ridgeback (fl oz/acre)
Aphids Armyworms Beet Armyworm Cabbage Looper Colorado Potato Beetle Corn Earworm Cucumber Beetles Cutworms European Corn Borer Fall Armyworm Flea Beetles Greenhouse Whitefly (outdoors) Leafhoppers Leafminers Loopers Pepper Weevil Plant Bugs Silverleaf Whitefly Southern Armyworm Stink Bugs Sweetpotato Whitefly Thrips Tomato Pinworm Tomato Hornworm Vegetable Leafminer Whitefly Yellowstriped Armyworm	4.5 – 13.8 (0.033-0.1 lb ai/acre bifenthrin and 0.011-0.033 lb ai/acre sulfoxaflor)
Banks Grass Mite Broad mite Carmine Mite Lygus spp. Pacific Spider Mite Twospotted Spider Mite	11.0 – 13.8 (0.08-0.1 lb ai/acre bifenthrin and 0.027-0.033 lb ai/acre sulfoxaflor)
Brown Marmorated Stink Bug	13.8 0.1 lb ai/acre bifenthrin and 0.033 lb ai/acre sulfoxaflor)

Application Timing: Treat in accordance with local economic thresholds. Consult your Corteva Agriscience representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 27.6 fl oz of Ridgeback (0.2 lb ai of bifenthrin and 0.067 lb ai of sulfoxaflor) per acre per year.

Potatoes (Crop Groups 1C and 1D)¹*

¹Root and tuber vegetables (crop group 1) including arracacha, arrowroot, bitter cassava, chayote (root), Chinese artichoke, chufa, dasheen, edible canna, ginger, Jerusalem artichoke, leren, potato, sweet cassava, sweet potato, taniar, true yam, turmeric, yam, yam bean

***For Foliar Use Only**

Pests and Application Rates:

Pests	Ridgeback (fl oz/acre)
Aphids Banded Cucumber Beetle (Adults) Black Flea Beetle (Adults) Click Beetles (Wireworm Adults) Cucumber Beetle (Adults) Japanese Beetle (Adults) Leafhoppers May/June Beetles (White Grub Adults) Rootworms (Adults) Whitefringed Beetle (Adults)	4.5 – 13.8 (0.033-0.1 lb ai/acre bifenthrin and 0.011-0.033 lb ai/acre sulfoxaflor)
Brown Marmorated Stink Bug Kudzu Bug	13.8 (0.1 lb ai/acre bifenthrin and 0.033 lb ai/acre sulfoxaflor)

Application Timing: Treat in accordance with local economic thresholds. Consult your Corteva Agriscience representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

- **Preharvest Interval:** Do not apply within 21 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 21 days apart.
- Do not make more than two applications per crop.
- Do not apply more than a total of 27.6 fl oz of Ridgeback (0.2 lb ai bifenthrin and 0.067 lb ai sulfoxaflor) per acre per year.

Soybean

Pests and Application Rates:

Pests	Ridgeback (fl oz/acre)
Alfalfa Caterpillar Aphids* Aster Leafhopper Bean Leaf Beetle Beet Armyworm Brown Stink Bug Cloverworm Corn Earworm Corn Rootworm (adults) Cucumber Beetles Cutworms European Corn Borer Fall Armyworm Flea Beetle Grasshoppers Imported Cabbageworm Japanese Beetle (adults) Pea Leaf Weevil Pea Weevil Plant Bugs Saltmarsh Caterpillar Sap Beetle Southern Armyworm Southern Green Stink Bug Stink Bugs Tarnished Plant Bug Thrips Tobacco Budworm Webworms Western Bean Cutworm Whitefly Yellowstriped Armyworm	4.5 – 13.8 (0.033-0.1 lb ai/acre bifenthrin and 0.011-0.033 lb ai/acre sulfoxaflor)
Soybean Aphid*	6.9 – 13.8 (0.05-0.1 lb ai/acre bifenthrin and 0.017-0.033 lb ai/acre sulfoxaflor)

Soybean (Cont.)

Pests and Application Rates:

Pests	Ridgeback (fl oz/acre)
Lygus spp. Twospotted Spider Mite Whitefly	11.0 – 13.8 (0.08-0.1 lb ai/acre bifenthrin and 0.027-0.033 lb ai/acre sulfoxaflor)
Brown Marmorated Stink Bug Kudzu Bug	13.8 (0.1 lb ai/acre bifenthrin and 0.033 lb ai/acre sulfoxaflor)

*If pyrethroid resistance is known to be present use no less than 10.3 fl oz/acre.

Application Timing: Treat in accordance with local economic thresholds. Consult your Corteva Agriscience representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

- **Preharvest Interval:** Do not apply within 18 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 30 days apart.
- Do not make more than four applications per year
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 41.3 fl oz of Ridgeback (0.3 lb ai of bifenthrin and 0.1 lb ai sulfoxaflor) per acre per year.
- No more than two applications may be made to soybean forage.

Succulent, Edible Podded and Dry Beans¹

¹Succulent, edible podded, and dry beans including adzuki bean, asparagus bean, bean, blackeyed pea, broad bean, chickpea, Chinese longbean, cowpea, fava bean, field bean, garbanzo bean, grain lupine, green lima bean, jackbean, kidney bean, lablab bean, lima bean, moth bean, mung bean, navy bean, pinto bean, rice bean, runner bean, snap bean, sweet lupine, sword bean, tepary bean, wax bean, white lupine, white sweet lupine, yardlong bean

Pests and Application Rates:

Pests	Ridgeback (fl oz/acre)
Aster Leafhopper Flea Beetle Leafhoppers	3.4 – 13.8 (0.025-0.1 lb ai/acre bifenthrin and 0.008-0.033 lb ai/acre sulfoxaflor)
Alfalfa Caterpillar Aphids Bean Leaf Beetle Beet Armyworm Brown Stink Bug Cucumber Beetles Cloverworm Corn Earworm Corn Rootworm (Adults) Cutworms European Corn Borer Fall Armyworm Grasshoppers Imported Cabbageworm Japanese Beetle (Adults) Leafminers Loopers Mexican Bean Beetle Pea Weevil Pea Leaf Weevil Plant Bugs Saltmarsh Caterpillar Sap Beetle Southern Armyworm Southern Green Stink Bug Stink Bugs Tarnished Plant Bug Thrips Tobacco Budworm Webworms Western Bean Cutworm Whitefly Yellowstriped Armyworm	5.5 – 13.8 (0.04-0.1 lb ai/acre bifenthrin and 0.013-0.033 lb ai sulfoxaflor)

Pests and Application Rates: (Cont.)

Pests	Ridgeback (fl oz/acre)
Banks Grass Mite Carmine Mite Lygus spp. Twospotted Spider Mite	11.0 – 13.8 (0.08-0.1 lb ai/acre bifenthrin and 0.027-0.033 lb ai/acre sulfoxaflor)
Brown Marmorated Stink Bug Kudzu Bug	13.8 (0.1 lb ai/acre bifenthrin and 0.033 lb ai/acre sulfoxaflor)

Application Timing: Treat in accordance with local economic thresholds. Consult your Corteva Agriscience representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

Succulent Peas & Beans

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 27.6 fl oz of Ridgeback (0.2 lb ai of bifenthrin 0.067 lb ai of sulfoxaflor) per acre per year.

Dried Beans & Peas

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 27.6 fl oz of Ridgeback (0.2 lb ai of bifenthrin and 0.067 lb ai of sulfoxaflor) per acre per year.

Tomato

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Pests and Application Rates:

Pests	Ridgeback (fl oz/acre)
Aphids Beet Armyworm Bean Leaf Beetle Cabbageworm Carmine Mite Cloverworm Corn Earworm Corn Rootworm Cucumber Beetles Cutworms Diamondback Moth European Corn Borer Fall Armyworm Flea Beetle Fleahoppers Greenhouse Whitefly (outdoors) Grasshoppers Japanese Beetle (Adults) Loopers Lygus spp. Melonworm Pea Weevil Pea Leaf Weevil Pickleworm Plant Bugs Rindworm Saltmarsh Caterpillar Sap Beetle Seedpod Weevil Silverleaf Whitefly Southern Armyworm Squash Bug Stink Bugs Sweetpotato Whitefly Tobacco Budworm Tarnished Plant Bug Thrips Whitefly Yellowstriped Armyworm	5.5 – 13.8 (0.04-0.1 lb ai/acre bifenthrin and 0.013-0.033 lb ai/acre sulfoxaflor)

Tomato (Cont.)

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Pests and Application Rates:

Pests	Ridgeback (fl oz/acre)
Twospotted Spider Mite	11.0 – 13.8 (0.08-0.1 lb ai/acre bifenthrin and 0.027-0.033 lb ai/acre sulfoxaflor)
Brown Marmorated Stink Bug	13.8 0.1 lb ai/acre bifenthrin and 0.033 lb ai/acre sulfoxaflor)

Application Timing: Treat in accordance with local economic thresholds. Consult your Corteva Agriscience representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 27.6 fl oz of Ridgeback (0.2 lb ai of bifenthrin and 0.067 lb ai of sulfoxaflor) per acre per year.

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