

# Headline<sup>®</sup> SC

# Fungicide

For use in disease control and plant health in the following crops: alfalfa, barley, citrus fruits, corn (all types), cotton, dried shelled peas and beans, edible-podded legume vegetables, grass grown for seed, mint, oats, oilseed crops (flax seed, rapeseed, safflower, sesame, sunflower), peanut, pecan, rye, sorghum, soybean, succulent shelled peas and beans, sugar beet, sugarcane, tuberous and corm vegetables (includes potato), and wheat and triticale

#### Active Ingredient\*:

| pyraciostrobin: (carbamic acid, [2-[[[1-(4-chiorophenyi)-1H-pyrazoi-3- |        |
|------------------------------------------------------------------------|--------|
| yl]oxy]methyl]phenyl]methoxy-, methyl ester)                           | 23.3%  |
| Other Ingredients:                                                     | 76.7%  |
| Total:                                                                 | 100.0% |
|                                                                        |        |

\* Equivalent to 2.08 pounds of pyraclostrobin per gallon

EPA Reg. No. 7969-289

**EPA Est. No.** 

U.S. Patent No. 7,816,392

# WARNING/AVISO

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

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

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

#### **Net Contents:**

BASF Agricultural Solutions US LLC 2 TW Alexander Drive Research Triangle Park, NC 27713

|              | FIRST AID                                                                                                                                                                                                                                                                                                     |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| If swallowed | <ul> <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 to an unconscious person.</li> </ul> |
| If on skin   | <ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>                                                                                                          |
| If in eyes   | <ul> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes; then continue rinsing.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>                                                |
| If inhaled   | <ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>                                       |
|              | HOTLINE NUMBER                                                                                                                                                                                                                                                                                                |

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information: 1-800-832-HELP (4357).

#### **Precautionary Statements**

#### **Hazards to Humans and Domestic Animals**

**WARNING.** May be fatal if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

#### Personal Protective Equipment (PPE)

Some materials that are chemically resistant to this product are listed below. For more options, refer to Category A on an EPA chemical-resistance category selection chart.

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Protective eyewear (goggles, face shield, or safety glasses)
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material (such as nitrile, butyl, neoprene and/or barrier laminate)
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, and loading

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

#### **Engineering Controls Statement**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### **USER SAFETY RECOMMENDATIONS**

#### Users should:

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

#### **Environmental Hazards**

This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

**DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

#### **Groundwater Advisory**

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

#### **Directions For Use**

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.

#### AGRICULTURAL USE REQUIREMENTS

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

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, made of any waterproof material (such as nitrile, butyl, neoprene, and/or barrier laminate)
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)

#### STORAGE AND DISPOSAL

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

#### **Pesticide Storage**

Store in original containers only. Keep container closed when not in use. **DO NOT** store near food or feed.

#### **Pesticide Disposal**

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

#### **Container Handling**

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

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

(continued)

#### STORAGE AND DISPOSAL (continued)

#### **Container Handling** (continued)

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

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

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

#### In Case of Emergency

In case of large-scale spillage regarding this product, call:

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

In case of medical emergency regarding this product, call:

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

### Steps to be taken in case material is released or spilled:

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

#### **Product Information**

Headline SC, a suspension concentrate (SC), contains the active ingredient pyraclostrobin, a member of the strobilurin class of chemistry derived from a natural antifungal substance. Preventive applications optimize disease control, resulting in improved plant health. Overall increased plant health may result in an improvement in crop growth and crop quality as well as increased crop yields.

Information regarding the contents and levels of metals in this product is available on the Internet at http://www.aapfco.org/metals.html.

To maximize disease control, apply **Headline SC** in a regularly scheduled protective spray program and use in a rotation program with other fungicides.

Because of its high specific activity, **Headline SC** has good residual activity against target fungi.

**Headline SC** is not for use in greenhouse or transplant production.

#### **Mode of Action**

Pyraclostrobin, the active ingredient of **Headline SC**, belongs to the group of respiration inhibitors classified by the US EPA and Canada PMRA as quinone outside inhibitors (QoI) or target site of action **Group 11** fungicides.

#### **Resistance Management**

**Headline SC** is effective against pathogens resistant to fungicides with modes of action different from those of Qol fungicides (target site **Group 11**), such as dicarboximides, sterol inhibitors, benzimidazoles, or phenylamides.

Fungal isolates resistant to **Group 11** fungicides, such as pyraclostrobin, azoxystrobin, fluoxastrobin, trifloxystrobin, and kresoxim-methyl, can eventually dominate the fungal population if **Group 11** fungicides are used predominantly and repeatedly in the same field in successive years as the primary method of control for the targeted pathogen species. This can result in reduction of disease control by **Headline SC** or other **Group 11** fungicides.

DO NOT exceed the maximum annual use rate or the total number of Headline SC applications per year and the maximum number of Headline SC applications stated in Table 1. Headline® SC fungicide Restrictions and Limitations Overview and Table 2. Headline® SC fungicide Crop-specific Requirements. Follow the label instructions for use of Headline SC or other target site of action Group 11 fungicides that have a similar site of action on the same pathogens.

When using a **Group 11** fungicide as a solo product, the number of applications should be no more than 1/3 of the total number of fungicide applications per year.

In programs applying or using tank mixes or pre-mixes of a **Group 11** fungicide with a fungicide of another group, the number of **Group 11** fungicide (QoI)-containing applications must not be more than 1/2 of the total number of fungicide applications per year. In programs applying or using **Group 11** fungicides with both solo products and mixtures, the number of **Group 11** fungicide (QoI)-containing applications must not be more than 1/2 of the total number of fungicide applications per year.

In fungicide alternation programs of **Group 11** (Qol)-containing fungicides with **non-Group 11** fungicides of different modes of action, the maximum number of sequential applications stated in **Restrictions and Limitations - All Crops** and **Table 2. Headline® SC fungicide Crop-specific Requirements** must be alternated with at least an equal number of applications of a **non-Group 11**-containing fungicide prior to using the **Group 11** (Qol)-containing fungicide again. If two sequential applications of a **Group 11** (Qol)-containing fungicide are made, follow this block of applications with 2 or more applications of a **non-Group 11**-containing fungicide prior to using the **Group 11** (Qol)-containing fungicide again.

#### **Resistance Management Advisory**

The following instructions may delay the development of fungicide resistance:

- Tank mixtures Use tank mixtures with effective fungicides from different target site of action groups that are registered/permitted for the same use and that are effective against the pathogens of concern. Use at least the minimum labeled rates of each fungicide in the tank mix.
- 2. IPM Integrate Headline SC into an overall disease and pest management program. Follow cultural practices known to reduce disease development. Consult your local extension specialist, certified crop advisor and/or BASF representative for additional IPM strategies established for your area. Headline SC can be used in agricultural extension advisory (disease forecasting) programs, which recommend application timing based on environmental factors favorable for disease development.
- 3. Monitoring Monitor efficacy of all fungicides used in the disease management program against the targeted pathogen and record other factors that may influence fungicide performance and/or disease development. If a Group 11 target site fungicide, such as Headline SC, appears to be less effective against a pathogen that it previously controlled or suppressed, contact a BASF representative, local extension specialist, or certified crop advisor for further investigation.

#### **Application Instructions**

Apply **Headline SC** rates as instructed in **Table 2**. **Headline® SC fungicide Crop-specific Requirements**. Apply **Headline SC** with ground sprayer, aerial equipment, or through sprinkler irrigation equipment. Check equipment frequently for calibration.

For containers 5 gallons or less, shake well prior to use. For containers greater than 5 gallons, recirculate prior to use. Consult BASF Representatives for additional information regarding agitation and recirculation.

Under low-level disease conditions, use minimum application rates. For severe or threatening disease conditions, use maximum application rates and shortened spray intervals.

#### **Cleaning Spray Equipment**

Spray equipment must be cleaned thoroughly before and after applying this product, particularly if a product with the potential to injure crops was used prior to **Headline SC**.

#### **Ground Application**

Apply **Headline SC** in sufficient water to ensure thorough coverage of foliage, blooms, and fruit for optimum disease control. Refer to **Additives and Tank Mixing Information** section for adjuvant or crop oil restrictions for ground applications in corn. See **Table 2. Headline® SC fungicide Crop-specific Requirements** for in-furrow instructions.

#### **Aerial Application**

For aerial application in New York State, DO NOT apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

Unless otherwise specified in this label or in supplemental labeling, use no less than 5 gallons of spray solution per acre. For aerial application to citrus orchards, use no less than 10 gallons of spray solution per acre. **DO NOT** apply when conditions favor drift from target area.

# Aerial Application to Alfalfa, Barley, Corn, Oats, Rye, Soybean, Wheat and Triticale

Aerial applications of **Headline SC** can be made to alfalfa, barley, corn, oats, rye, soybean, wheat and triticale in water volumes of 2 or more gallons of spray solution per acre (gpa). The use of a crop oil or adjuvant can be used to improve spray coverage (see **Additives and Tank Mixing Information** section). Refer to the adjuvant product label for specific use directions and restrictions.

For optimum results in high disease pressure, use a minimum spray volume of 4 gpa. Select spray nozzles, pumping pressure, and sprayer height to provide mediumto-fine spray droplets that penetrate throughout the crop canopy. Spray calibration must be conducted to confirm spray droplet sizes. Continue to monitor spray application

(including weather conditions) to ensure proper droplet size and canopy penetration.

**Spray volumes of 5 gallons or more per acre.** For applications with spray volumes of 5 gallons or more per acre, an adjuvant can be used to improve spray coverage (see **Additives and Tank Mixing Information**). Refer to the adjuvant product label for specific use directions and restrictions.

Select spray nozzles, pumping pressure, and sprayer height to provide medium-to-fine spray droplets that penetrate throughout the crop canopy. Calibrate spray to confirm spray droplet sizes. Monitor spray application including weather conditions to ensure proper droplet size and canopy penetration.

#### **Spray Drift Management**

**DO NOT** spray when conditions favor drift beyond area intended for application. Conditions that may contribute to drift include thermal inversion, wind speed and direction, spray nozzle/pressure combinations, spray droplet size, temperature/humidity, etc. Contact your state extension agent for spray drift prevention guidelines in your area. All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers. Avoiding spray drift at the application site is the responsibility of the applicator.

#### **Aerial Application Methods and Equipment**

The interaction of many equipment-related and weatherrelated factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

**DO NOT** apply under circumstances where possible drift to unprotected persons, to food, forage, or other plantings that might be damaged, or crops thereof rendered unfit for sale, use or consumption can occur.

**DO NOT** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements **DO NOT** apply to forestry applications, public health uses, or to applications using dry formulations.

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the fixed wingspan or 90% of the rotor blade diameter.
- Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and take into account the aerial drift reduction advisory information.

#### **Information on Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. Use the largest droplet size consistent with acceptable efficacy. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **Wind**; **Temperature and Humidity**; and **Temperature Inversions**).

#### **Controlling droplet size:**

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure DO NOT exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### Wind

**DO NOT** apply at wind speeds greater than 15 mph. Drift potential is lowest when wind speed does not exceed 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Avoid applications below 2 mph due to variable wind direction and high inversion potential. Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

#### Temperature and Humidity

Low humidity and high temperatures increase the evaporation of spray droplets and, therefore, the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures. When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### **Temperature Inversions**

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions.

Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light-to-no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified 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.

#### **Sensitive Areas**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. bodies of water or nontarget crops) is minimal and when wind is blowing away from the sensitive areas.

# Directions For Use Through Sprinkler Irrigation Systems

#### Sprayer Preparation

Chemical tank and injector system must be thoroughly cleaned. Flush system with clean water.

#### **Application Instructions**

Apply **Headline® SC fungicide** at rates and timings specified in this label.

#### Sprinkler Irrigation Applications Use Precautions

- Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. **DO NOT** apply this product through any other type of irrigation system.
- Add this product to the pesticide supply tank containing sufficient water to maintain a continuous flow by the injection equipment. In continuous moving systems, inject this product/water mixture continuously, applying the labeled rate per acre for that crop. DO NOT exceed 1/2 inch (13,577 gallons) per acre. In stationary or noncontinuous moving systems, inject the product/water mixture in the last 15 to 30 minutes of each set allowing sufficient time for all of the required pesticide to be applied by all the sprinkler heads and applying the labeled rate per acre for that crop. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. Thorough coverage of foliage is required for good control. Maintain agitation during the entire application period.
- Contact state extension service specialists, equipment manufacturers, or other experts for calibration questions.
- The system must contain a functional check valve, vacuum-relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide-injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.
   A person knowledgeable of the chemigation system and responsible for its operation, or under supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- DO NOT connect an irrigation system (including green-house systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

# Specific Instructions for Public Water Systems

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system must be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being

- withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

#### **Additives and Tank Mixing Information**

**Headline® SC fungicide** can be tank mixed with most recommended fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives as specified in **Table 2. Headline® SC fungicide Crop-specific Requirements**.

Under some conditions, the use of additives or adjuvants may improve the performance of **Headline SC**. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, or crop injury can result from mixing **Headline SC** with other products. Therefore, before using any tank mix (fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants and additives), test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application. Follow the most restrictive label.

# Adjuvant or Crop Oil Use Limitations on Corn (ground and aerial applications)

Adjuvant crop damage can occur when an adjuvant or crop oil is used after the V8 stage and before the VT stage (the VT stage is defined as when the tassel's last branch is completely visible outside the whorl). If an adjuvant or crop oil is used after the V8 stage and before the VT stage, the grower and user are responsible for contacting the adjuvant source (adjuvant distributor, retailer, or manufacturer) for advice and confirmation that the adjuvant has been tested and proven to be safe for application from V8 to VT corn stage. Refer to adjuvant and/or crop oil labels for specific use directions and restrictions. Always follow the most restrictive label.

Another fungicide or an insecticide may be included in the tank mix if needed and labeled for use on corn. Refer to the tank mix pesticide product labels for specific use directions and restrictions. Always follow the most restrictive label.

#### **Mixing Order**

- 1. **Water** Agitate a thoroughly clean sprayer tank 3/4 full of clean water.
- 2. **Agitation** Maintain constant agitation throughout mixing and application.
- 3. **Inductor** If an inductor is used, rinse it thoroughly after each component has been added.
- 4. Products in PVA bags Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- 5. Water-dispersible products (such as Headline SC, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions) For containers 5 gallons or less, shake well prior to use. For containers greater than 5 gallons, recirculate prior to use. Consult BASF Representatives for additional information regarding agitation and recirculation.
- 6. Water-soluble products
- 7. **Emulsifiable concentrates** (such as oil concentrates when applicable)
- 8. Water-soluble additives (such as ammonium sulfate [AMS] or urea ammonium nitrate [UAN] when applicable)
- 9. Remaining quantity of water

Make sure each component is thoroughly mixed and suspended before adding tank mix partners. Maintain constant agitation during application. See **Table 2**. **Headline® SC fungicide Crop-specific Requirements** for more details.

#### **Restrictions and Limitations - All Crops**

- DO NOT exceed the maximum product rate (fl ozs/A) per year, the maximum rate per application, or the total number of applications of Headline SC per year as stated in Table 1. Headline® SC fungicide Restrictions and Limitations Overview and Table 2. Headline® SC fungicide Crop-specific Requirements. Preharvest interval (PHI) restrictions are also included in these tables.
- DO NOT use Headline SC in greenhouse or transplant production.
- For aerial application in New York State, DO NOT apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

#### **Crop Rotation Restriction**

Crops listed on the **Headline SC**, **Cabrio® EG fungicide** and **Pristine® fungicide** labels may be planted immediately following the last application. For all other crops, **DO NOT plant sooner than** 14 days after the last application.

# **Ground Application Directed or Banded Sprays**

The application rates shown in the following tables pertain to both aerial and ground (broadcast) methods of application. **Headline® SC fungicide** may also be applied as a directed or banded spray over the rows or plant beds with alleys or row middles left unsprayed. For such uses, reduce the **Headline SC** rate in proportion to the area actually sprayed. This adjustment is necessary to prevent applying the product at use rates higher than permitted on this label.

Use the following formula to determine the broadcast equivalent rate for directed or banded sprays:

sprayed bed width + unsprayed row middles = total row width

**EXAMPLE:** Directed spray application to 45-inch plant beds separated by 15-inch unsprayed row-middles at a 12 fl ozs/A label broadcast rate:

45 inches sprayed bed width + 15 inches unsprayed row middles = 60 inches total row width

Table 1. Headline® SC fungicide Restrictions and Limitations Overview¹

| Crop/Crop Group <sup>2</sup>                                               | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days)           | Maximum<br>Product Rate<br>per Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum Product Rate per Year (fl ozs/A) (lbs ai pyraclostrobin) |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------------|
| Alfalfa <sup>3</sup>                                                       | 14                                                                       | 9                                                        | 3                                                         | 27<br>(0.45)                                                     |
| Barley                                                                     | See Table 2. Headline® SC fungicide Crop- specific Requirements          | 9                                                        | 2                                                         | 18<br>(0.29)                                                     |
| Citrus Fruits Group⁴                                                       | 0                                                                        | 15                                                       | 2                                                         | 54<br>(0.88)                                                     |
| Corn <sup>5, 7</sup><br>(all types)                                        | 7                                                                        | 12                                                       | 2                                                         | 72<br>(1.18)                                                     |
| Cotton <sup>5</sup>                                                        | 30                                                                       | 12                                                       | 2                                                         | 36<br><i>(0.58)</i>                                              |
| Dried Shelled<br>Peas and Beans <sup>5, 7</sup><br>(except soybeans)       | 21                                                                       | 9                                                        | 2                                                         | 18<br><i>(0.29)</i>                                              |
| Edible-podded<br>Legume Vegetables                                         | 7                                                                        | 9                                                        | 2                                                         | 18<br><i>(</i> 0.29)                                             |
| Grass Grown for Seed                                                       | 14                                                                       | 12                                                       | 2                                                         | 24<br>(0.39)                                                     |
| Mint                                                                       | 14                                                                       | 12                                                       | 2                                                         | 48<br>(0.78)                                                     |
| Oats                                                                       | Apply no later than the beginning of flowering (Feekes 10.5, Zadok's 59) | 9                                                        | 2                                                         | 18<br>(0.29)                                                     |
| Oilseed Crops<br>(flax seed, rapeseed,<br>safflower, sesame,<br>sunflower) | 21                                                                       | 12                                                       | 2                                                         | 24<br>(0.39)                                                     |
| Peanut <sup>5, 7</sup>                                                     | 14                                                                       | 15                                                       | 2                                                         | 45<br>(0.73)                                                     |
| Pecan                                                                      | 14                                                                       | 7                                                        | 2                                                         | 28<br>(0.46)                                                     |
| Rye                                                                        | Apply no later than<br>50% head emergence<br>(Feekes 10.3, Zadok's 55)   | 9                                                        | 2                                                         | 18<br><i>(0.29)</i>                                              |
| Sorghum                                                                    | Apply no later than<br>25% flowering                                     | 12                                                       | 1                                                         | 12<br><i>(</i> 0.20)                                             |
| Soybean <sup>5, 7</sup>                                                    | 21                                                                       | 12                                                       | 2                                                         | 24<br>(0.39)                                                     |
| Succulent Shelled<br>Peas and Beans                                        | 7                                                                        | 9                                                        | 2                                                         | 18<br><i>(</i> 0.29)                                             |
| Sugar Beet <sup>5</sup><br>(roots and tops)                                | 7                                                                        | 12                                                       | 2                                                         | 48<br>(0.78)                                                     |
| Sugarcane <sup>6</sup>                                                     | 14                                                                       | 12                                                       | 2                                                         | 48<br>(0.78)                                                     |
| Tuberous and Corm<br>Vegetables Subgroup <sup>5</sup><br>(includes potato) | 3                                                                        | 12                                                       | 1                                                         | 72<br>(1.18)                                                     |

(continued)

Table 1. Headline® SC fungicide Restrictions and Limitations Overview¹ (continued)

| Crop/Crop Group <sup>2</sup> | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days)           | Maximum<br>Product Rate<br>per Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum Product Rate per Year (fl ozs/A) (lb ai pyraclostrobin) |
|------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------|
| Wheat and Triticale          | Apply no later than the beginning of flowering (Feekes 10.5, Zadok's 59) | 9                                                        | 2                                                         | 18<br><i>(0.29)</i>                                             |

<sup>&</sup>lt;sup>1</sup> See **Table 2. Headline<sup>®</sup> SC fungicide Crop-specific Requirements** for complete directions and exceptions.

Aerial application is permitted for all labeled crops. For aerial application in New York State, DO NOT apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

<sup>&</sup>lt;sup>2</sup> For a complete list of crops within a crop group, see **Table 2. Headline® SC fungicide Crop-specific Requirements**.

<sup>&</sup>lt;sup>3</sup> **DO NOT** apply more than 27 fl ozs/A (0.45 lb ai/acre) of **Headline SC** in alfalfa per year.

<sup>&</sup>lt;sup>4</sup> Maximum product rate per acre per application may vary for citrus fruits depending on target disease. Refer to **Table 2. Headline® SC fungicide Crop-specific Requirements**, **Citrus Fruits** for maximum rates per application by target disease.

<sup>&</sup>lt;sup>5</sup> The maximum product rate per year includes the combination in-furrow and foliar uses.

<sup>&</sup>lt;sup>6</sup> Not for use on sugarcane in California.

<sup>&</sup>lt;sup>7</sup> Not for in-furrow use in California.

Table 2. Headline® SC fungicide Crop-specific Requirements

| Crop    | Target Disease                                            | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year*<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|---------|-----------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| Alfalfa | Anthracnose<br>Colletotrichum trifolii                    | 6 to 9                                           | 3                                                         | 27<br>(0.45 lb                                     | 14                                                             |
|         | Common leaf spot Pseudopeziza medicaginis                 |                                                  |                                                           | ai/acre)                                           |                                                                |
|         | Downy mildew Peronospora trifoliorum                      |                                                  |                                                           |                                                    |                                                                |
|         | Leaf spot<br>Leptosphaerulina briosiani                   |                                                  |                                                           |                                                    |                                                                |
|         | Powdery mildew  Erysiphe pisi                             |                                                  |                                                           |                                                    |                                                                |
|         | Rhizoctonia blight/black patch Rhizoctonia spp.           |                                                  |                                                           |                                                    |                                                                |
|         | Rust Uromyces spp.                                        |                                                  |                                                           |                                                    |                                                                |
|         | Spring black stem and leaf spot<br>Phoma medicaginis      |                                                  |                                                           |                                                    |                                                                |
|         | Stagnospora leaf spot<br>Stagnospora meliloti             |                                                  |                                                           |                                                    |                                                                |
|         | Stemphyllium leaf spot<br>Stemphyllium spp.               |                                                  |                                                           |                                                    |                                                                |
|         | Summer black stem and leaf spot<br>Cercospora medicaginis |                                                  |                                                           |                                                    |                                                                |
|         | Yellow leaf blotch Leptotrichila medicaginis              |                                                  |                                                           |                                                    |                                                                |

**Application Directions.** For optimal disease control, begin **Headline SC** applications prior to disease development.

**Resistance Management. DO NOT** make more than three (3) **Headline SC** applications per year.

Repeat applications on a 14 to 21 day interval if conditions are conducive for disease development. **DO NOT** make more than two (2) **Headline SC** applications per cutting or three (3) **Headline SC** applications per year. Use the higher rate and shorter interval when disease pressure is high.

\* **DO NOT** apply more than 27 fl ozs/A (0.45 lb ai/acre) of **Headline SC** in alfalfa per year.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop   | Target Disease                                                                        | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|--------|---------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Barley | Black point Kernel blight or<br>Head mold<br>Cochliobolus sativus,<br>Alternaria spp. | 6 to 9*                                          | 2                                                         | 18<br>(0.29 lb<br>ai/acre)                        | Apply no later<br>than 50% head<br>emergence<br>(Feekes 10.3,  |
|        | Leaf rust Puccinia hordei, P. recondita                                               |                                                  |                                                           |                                                   | Zadok's 55);<br>14 days in<br>selected states<br>(see map).    |
|        | Net blotch  Pyrenophora teres                                                         |                                                  |                                                           |                                                   | (See map).                                                     |
|        | Powdery mildew  Erysiphe graminis f. sp.,  hordei                                     |                                                  |                                                           |                                                   |                                                                |
|        | Scald Rhynchosporium secalis                                                          |                                                  |                                                           |                                                   |                                                                |
|        | Septoria leaf and glume blotch Septoria spp., Stagonospora spp.                       |                                                  |                                                           |                                                   |                                                                |
|        | Spot blotch Cochliobolus sativus                                                      |                                                  |                                                           |                                                   |                                                                |
|        | Stem rust  Puccinia graminis f. sp.,  tritici                                         |                                                  |                                                           |                                                   |                                                                |
|        | Stripe rust Puccinia striiformis                                                      |                                                  |                                                           |                                                   |                                                                |
|        | Tan spot Yellow leaf spot Pyrenophora trichostoma                                     |                                                  |                                                           |                                                   |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development. To maximize yields in cereals, protect the flag leaf. Apply **Headline SC** immediately after flag-leaf emergence for optimum results.

**Headline SC** does not control Fusarium head blight (head scab) or prevent the reductions in grain quality that can result from this disease. When head blight is a concern, manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

**DO NOT** harvest barley hay or feed green-chopped barley within 14 days of last application.

\*For early season control of net blotch, Septoria leaf and glume blotch, spot blotch, and tan spot when conditions favor disease development, apply 3 to 6 fl ozs per acre of **Headline SC** either in combination with a herbicide application or when conditions favor disease development. When the 3 to 6 fl ozs early season application rate is used, a second application of **Headline SC** may be required to protect the emerged flag leaf. Environmental conditions for disease or current disease pressure at the time of flag-leaf emergence should be used to determine the **Headline SC** rate for the second application. For high disease pressure, use the higher rate of **Headline SC**. Early season control is not registered for use in California.

**Table 2. Headline® SC fungicide Crop-specific Requirements** (continued)

#### **Application Directions** (continued)

Barley can be harvested 14 days after the last application in the following states: **AZ** (north of I-10), **CO**, **ID**, **MT** (west of Rt 87/I-15), **NV**, **NM**, **OR**, **TX** (west of Rt 283/377), **UT**, **WA**, and **WY** (west of I-25/I-90), as shown in the **Headline SC Use Area Map - Barley, 14-day PHI**.

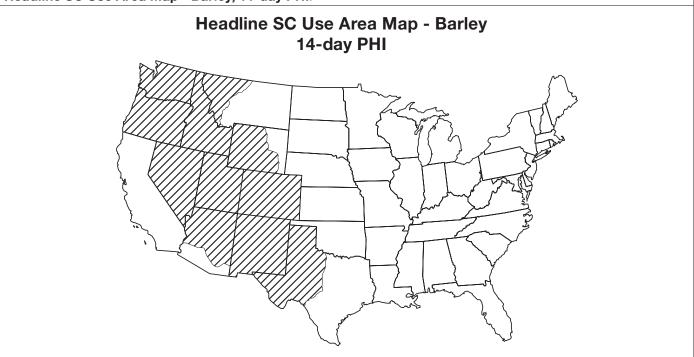


Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop                                                                             | Target Disease                                                                            | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Citrus Fruits Group Calamondin Citron Citrus hybrids Chironja Grapefruit         | Greasy spot Mycosphaerella citri Scab Elsinoe spp. Alternaria brown spot Alternaria citri | 9 to 12<br>12 to 15                              | 2                                                         | 54<br>(0.88 lb<br>ai/acre)                        | 0                                                              |
| Kumquat<br>Lemon<br>Lime<br>Mediterranean<br>mandarin                            | Anthracnose Colletotrichum acutatum, C. gloeosporioides                                   |                                                  |                                                           |                                                   |                                                                |
| Orange, sour Orange, sweet Pummelo Satsuma mandarin Tangelo Tangerine (mandarin) | Black spot Guignardia citricarpa Melanose Diaporthe citri Post bloom fruit drop           |                                                  |                                                           |                                                   |                                                                |
| Tangor                                                                           | Colletotrichum acutatum                                                                   |                                                  |                                                           |                                                   |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development and continue on a 10- to 21-day interval.

Use the higher rate when disease pressure is high.

For control of diseases other than greasy spot, integrate 1 to 2 Headline SC applications early in the spray program. For greasy spot control, integrate 1 to 2 Headline SC applications into the fungicide program during the mid-to-late season.

For aerial application to citrus orchards, use no less than 10 gallons of spray solution per acre.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.88 lb ai pyraclostrobin (54 fl ozs of **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop                                                    | Target Disease                                                                                                             | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year*<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| Corn Field corn Popcorn Sweet corn Seed production corn | Anthracnose** Colletotrichum graminicola Eyespot Kabatiella zeae Gray leaf spot                                            | 6 to 12                                          | 2                                                         | 72<br>(1.18 lbs<br>ai/acre)                        | 7                                                              |
| COIT                                                    | Cercospora zea-maydis  Northern corn leaf blight**  Exserohilum turcicum  Northern corn leaf spot**  Cochliobolus carbonum |                                                  |                                                           |                                                    |                                                                |
|                                                         | Physoderma brown spot**  Physoderma maydis  Rust, common                                                                   |                                                  |                                                           |                                                    |                                                                |
|                                                         | Puccinia sorghi Rust, Southern Puccinia polyspora                                                                          |                                                  |                                                           |                                                    |                                                                |
|                                                         | Southern corn leaf blight**  Bipolaris maydis  Yellow leaf blight**  Phyllosticta maydis                                   |                                                  |                                                           |                                                    |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high. Under high disease pressure for Northern corn leaf blight and Southern corn leaf blight, apply 9 to 12 fl ozs per acre.

**Headline SC** can be used with adjuvants in corn. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 1.18 lbs ai pyraclostrobin (72fl ozs of **Headline SC**) per acre per year.

In field corn, DO NOT make more than two (2) Headline SC applications per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action. If more than two (2) **Headline SC** applications are made in a multiple spray program, alternate each subsequent **Headline SC** application with at least one (1) application of a **non-Group 11** fungicide.

<sup>\*</sup>The maximum product rate per year includes the combination of in-furrow and foliar uses.

<sup>\*\*</sup> The use rate in California is 9 to 12 fl ozs per acre.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

## Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia and the Suppression of Soilborne Fusarium Species in Corn\*

| Rate per                         | Headline SC Rate (fl ozs/A)  |                              |                              |                              |                              |                              |                 |                 |                 |  |
|----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------|-----------------|-----------------|--|
| 1000 row feet<br>(fl oz product) | 15-inch<br>rows              | 20-inch<br>rows              | 22-inch<br>rows              | 30-inch<br>rows              | 32-inch<br>rows              | 34-inch<br>rows              | 36-inch<br>rows | 38-inch<br>rows | 40-inch<br>rows |  |
| 0.1                              | 3.5                          |                              |                              |                              |                              |                              |                 |                 |                 |  |
| 0.2                              | 7.0                          | 5.2                          | 4.7                          | 3.5                          | 3.3                          | 3.2                          | 3.0             |                 |                 |  |
| 0.3                              | 10.5                         | 7.8                          | 7.1                          | 5.2                          | 5.0                          | 4.8                          | 4.5             | 4.3             | 4.0             |  |
| 0.4                              | see<br>footnote <sup>1</sup> | 10.4                         | 9.5                          | 6.9                          | 6.7                          | 6.4                          | 6.0             | 5.7             | 5.4             |  |
| 0.5                              | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 11.8                         | 8.7                          | 8.4                          | 8.0                          | 7.5             | 7.1             | 6.7             |  |
| 0.6                              | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 10.4                         | 10.0                         | 9.6                          | 9.0             | 8.5             | 8.1             |  |
| 0.7                              | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 11.7                         | 11.2                         | 10.5            | 10.0            | 9.4             |  |
| 0.8                              | see<br>footnote <sup>1</sup> | 12.0            | 11.4            | 10.8            |  |

**Application Directions.** Use 0.1 to 0.8 fl oz of **Headline SC** per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.

When Rhizoctonia or Fusarium seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use **Headline SC** at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.

**DO NOT** apply more than 12 fl ozs per acre in-furrow of **Headline SC**.

<sup>\*</sup> Not for in-furrow use in California.

<sup>&</sup>lt;sup>1</sup> For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet.

For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet.

For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.

For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet.

For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop   | Target Disease                                     | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year*<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|--------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| Cotton | Alternaria leaf spot, boll rot<br>Alternaria spp.  | 6 to 12                                          | 2                                                         | 36<br>(0.58 lb                                     | 30                                                             |
|        | Anthracnose, boll rot<br>Glomerella spp.           |                                                  |                                                           | ai/acre)                                           |                                                                |
|        | Ascochyta blight, boll rot<br>Ascochyta spp.       |                                                  |                                                           |                                                    |                                                                |
|        | Cercospora blight and leaf spot<br>Cercospora spp. |                                                  |                                                           |                                                    |                                                                |
|        | Diplodia boll rot<br>Diplodia spp.                 |                                                  |                                                           |                                                    |                                                                |
|        | Hard lock, boll rot Fusarium spp.                  |                                                  |                                                           |                                                    |                                                                |
|        | Phoma blight, boll rot<br>Phoma spp.               |                                                  |                                                           |                                                    |                                                                |
|        | Rust Puccinia spp., Phykopsora spp.                |                                                  |                                                           |                                                    |                                                                |
|        | Stemphyllium leaf spot<br>Stemphyllium spp.        |                                                  |                                                           |                                                    |                                                                |

**Application Directions. For foliar and boll rot disease control**, begin **Headline SC** applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high. **For seedling disease control**, see in-furrow application instructions following.

**Headline SC** can be used with adjuvants in cotton. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

No livestock grazing or feeding restrictions.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.58 lb ai pyraclostrobin (36 fl ozs of **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

\*The maximum product rate per year includes the combination of in-furrow and foliar uses.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Cotton |                              |                              |                              |                              |                              |                              |              |              |              |  |  |
|-----------------------------------------------------------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--------------|--------------|--------------|--|--|
| Rate per                                                                                |                              | Headline SC Rate (fl ozs/A)  |                              |                              |                              |                              |              |              |              |  |  |
| 1000 row feet<br>(fl oz product)                                                        | 15-inch rows                 | 20-inch rows                 | 22-inch rows                 | 30-inch rows                 | 32-inch<br>rows              | 34-inch rows                 | 36-inch rows | 38-inch rows | 40-inch rows |  |  |
| 0.1                                                                                     | 3.5                          |                              |                              |                              |                              |                              |              |              |              |  |  |
| 0.2                                                                                     | 7.0                          | 5.2                          | 4.7                          | 3.5                          | 3.3                          | 3.2                          | 3.0          |              |              |  |  |
| 0.3                                                                                     | 10.5                         | 7.8                          | 7.1                          | 5.2                          | 5.0                          | 4.8                          | 4.5          | 4.3          | 4.0          |  |  |
| 0.4                                                                                     | see<br>footnote <sup>1</sup> | 10.4                         | 9.5                          | 6.9                          | 6.7                          | 6.4                          | 6.0          | 5.7          | 5.4          |  |  |
| 0.5                                                                                     | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 11.8                         | 8.7                          | 8.4                          | 8.0                          | 7.5          | 7.1          | 6.7          |  |  |
| 0.6                                                                                     | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 10.4                         | 10.0                         | 9.6                          | 9.0          | 8.5          | 8.1          |  |  |
| 0.7                                                                                     | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 11.7                         | 11.2                         | 10.5         | 10.0         | 9.4          |  |  |
| 0.8                                                                                     | see<br>footnote <sup>1</sup> | 12.0         | 11.4         | 10.8         |  |  |

**Application Directions.** Use 0.1 to 0.8 fl oz of **Headline SC** per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.

When Rhizoctonia seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use **Headline SC** at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.

#### **DO NOT** apply more than 12 fl ozs per acre of **Headline SC**.

<sup>&</sup>lt;sup>1</sup> For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet.

For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet.

For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.

For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet.

For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop                                                                                                                 | Target Disease                                     | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year*<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| Dried Shelled<br>Peas and                                                                                            | Anthracnose Colletotrichum spp.                    | 6 to 9                                           | 2                                                         | 18<br>(0.29 lb                                     | 21                                                             |
| Beans (except soybeans)                                                                                              | Alternaria leaf and pod spot<br>Alternaria spp.    |                                                  |                                                           | ai/acre)                                           |                                                                |
| Broad bean<br>Chickpea<br>Guar<br>Lablab bean                                                                        | Ascochyta blight Phoma exigua, Ascochyta spp.      |                                                  |                                                           |                                                    |                                                                |
| Lentil<br>Pigeon pea                                                                                                 | Asian soybean rust<br><i>Phakopsora pachyrhizi</i> |                                                  |                                                           |                                                    |                                                                |
| <b>Lupinus</b> spp. Grain lupin                                                                                      | Cercospora leaf spot<br>Cercospora spp.            |                                                  |                                                           |                                                    |                                                                |
| Sweet lupin<br>White lupin                                                                                           | Downy mildew<br><i>Phytophthora nicotiana</i> e    |                                                  |                                                           |                                                    |                                                                |
| <b>Phaseolus spp.</b> Field bean Kidney bean                                                                         | Mycosphaerella blight<br>Mycosphaerella spp.       |                                                  |                                                           |                                                    |                                                                |
| Lima bean<br>Navy bean                                                                                               | Powdery mildew<br>Erysiphe polygoni                |                                                  |                                                           |                                                    |                                                                |
| Pink bean Pinto bean Tepary bean                                                                                     | Rust<br>Uromyces appendiculatus                    |                                                  |                                                           |                                                    |                                                                |
| Vigna spp. Adzuki bean Black-eyed pea Catjang Cowpea Crowder pea Moth bean Mung bean Rice bean Southern pea Urd bean |                                                    |                                                  |                                                           |                                                    |                                                                |
| <i>Pisum</i> spp.<br>Field pea                                                                                       |                                                    |                                                  |                                                           |                                                    |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

Bean forage, bean hay, pea vines, and pea hay may be fed no sooner than 14 days after last application.

**Headline SC** can be used with adjuvants in dried shelled peas and beans (except soybean). See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs of **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

\*The maximum product rate per year includes the combination of in-furrow and foliar uses.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia and the Suppression of Soilborne Fusarium Species in Dried Shelled Peas and Beans\*, \*\* (except soybeans)

| Rate Per        | Headline SC Rate (fl ozs/A)  |                              |                              |                              |                              |                              |              |                 |                 |  |
|-----------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--------------|-----------------|-----------------|--|
| (fl oz product) | 15-inch<br>rows              | 20-inch<br>rows              | 22-inch<br>rows              | 30-inch rows                 | 32-inch<br>rows              | 34-inch<br>rows              | 36-inch rows | 38-inch<br>rows | 40-inch<br>rows |  |
| 0.1             | 3.5                          |                              |                              |                              |                              |                              |              |                 |                 |  |
| 0.2             | 7.0                          | 5.2                          | 4.7                          | 3.5                          | 3.3                          | 3.2                          | 3.0          |                 |                 |  |
| 0.3             | see<br>footnote <sup>1</sup> | 7.8                          | 7.1                          | 5.2                          | 5.0                          | 4.8                          | 4.5          | 4.3             | 4.0             |  |
| 0.4             | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 6.9                          | 6.7                          | 6.4                          | 6.0          | 5.7             | 5.4             |  |
| 0.5             | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 8.7                          | 8.4                          | 8.0                          | 7.5          | 7.1             | 6.7             |  |
| 0.6             | see<br>footnote <sup>1</sup> | 9.0          | 8.5             | 8.1             |  |

**Application Directions.** Use 0.1 to 0.6 fl oz of **Headline SC** per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.

When Rhizoctonia or Fusarium seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use **Headline SC** at a product rate per acre equivalent to 9 fl ozs and/or tank mix with a fungicide having a different mode of action.

**DO NOT** apply more than 9 fl ozs per acre in-furrow of **Headline SC**.

<sup>\*</sup>Adzuki bean, black-eyed pea, broad bean, catjang, chickpea, crowder pea, field bean, grain lupin, guar, kidney bean, lablab bean, lima bean, moth bean, mung bean, navy bean, pink bean, pinto bean, rice bean, Southern pea, sweet lupin, tepary bean, urd bean, and white lupin

<sup>\*\*</sup> Not for in-furrow use in California.

<sup>&</sup>lt;sup>1</sup> For 30- to 34-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.

For 20- to 22-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.

For 15-inch rows, use a maximum of 0.2 fl oz per 1000 row feet.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop                                                              | Target Disease                                  | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|-------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Edible-podded<br>Legume<br>Vegetables                             | Alternaria leaf and pod spot<br>Alternaria spp. | 6 to 9                                           | 2                                                         | 18<br>(0.29 lb<br>ai/acre)                        | 7                                                              |
| Jack bean                                                         | Anthracnose  Colletotrichum spp.                |                                                  |                                                           |                                                   |                                                                |
| Pigeon pea Soybean (immature seed)                                | Ascochyta blight Phoma exigua, Ascochyta spp.   |                                                  |                                                           |                                                   |                                                                |
| Sword bean                                                        | Asian soybean rust                              |                                                  |                                                           |                                                   |                                                                |
| Phaseolus spp.                                                    | Phakopsora pachyrhizi                           |                                                  |                                                           |                                                   |                                                                |
| Runner bean<br>Snap bean                                          | Cercospora leaf spot Cercospora spp.            |                                                  |                                                           |                                                   |                                                                |
| Wax bean  Vigna spp.                                              | Downy mildew Phytophthora nicotianae            |                                                  |                                                           |                                                   |                                                                |
| Asparagus bean<br>Chinese<br>Iongbean                             | Mycosphaerella blight  Mycosphaerella spp.      |                                                  |                                                           |                                                   |                                                                |
| Moth bean<br>Yardlong bean                                        | Powdery mildew Erysiphe Polygoni                |                                                  |                                                           |                                                   |                                                                |
| Pisum spp.  Dwarf pea  Edible-podded pea  Snowpea  Sugar snap pea | Rust Uromyces appendiculatus                    |                                                  |                                                           |                                                   |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

Bean forage, bean hay, pea vines, and pea hay maybe fed no sooner than 14 days after last application.

**Headline SC** can be used with adjuvants in edible-podded legume vegetables. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs of **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop                 | Target Disease                                     | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|----------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Grass Grown for Seed | Rust Puccinia recondita, P. graminis               | 6 to 12                                          | 2                                                         | 24<br>(0.39 lb<br>ai/acre)                        | 14                                                             |
|                      | Suppression Only: Powdery mildew Erysiphe graminis |                                                  |                                                           |                                                   |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development. Apply again 14 to 21 days later.

Use the higher rate and shorter interval when disease pressure is high.

**DO NOT** graze or feed forage or hay to livestock within 27 days of last application.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.39 lb ai pyraclostrobin (24 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

| Crop | Target Disease                                        | Product Rate per Application (fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|------|-------------------------------------------------------|-----------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Mint | Leaf spot Ramularia spp., Alternaria spp., Phoma spp. | 9 to 12                                 | 2                                                         | 48<br>(0.78 lb<br>ai/acre)                        | 14                                                             |
|      | Powdery mildew<br>Erysiphe spp.                       |                                         |                                                           |                                                   |                                                                |
|      | Rust <i>Puccinia</i> spp.                             |                                         |                                                           |                                                   |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

**Headline SC** can be used with adjuvants in mint. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.78 lb ai pyraclostrobin (48 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop | Target Disease                                                                                    | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|------|---------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Oats | Crown rust Puccinia coronata                                                                      | 6 to 9*                                          | 2                                                         | 18<br>(0.29 lb                                    | Apply no later than the beginning                              |
|      | Helminthosporium leaf spot<br>Drechslera avenae                                                   |                                                  |                                                           | ai/acre)                                          | of flowering<br>(Feekes 10.5,<br>Zadok's 59)                   |
|      | Leaf blotch  Pyrenophora avenae                                                                   |                                                  |                                                           |                                                   | Zadorro doj                                                    |
|      | Leaf rust <i>Puccinia</i> spp.                                                                    |                                                  |                                                           |                                                   |                                                                |
|      | Septoria blotch and stem rot<br>Septoria avenae,<br>Phaeosphaeria avenaria,<br>Stagnospora avenae |                                                  |                                                           |                                                   |                                                                |
|      | Spot blotch  Bipolaris spp.                                                                       |                                                  |                                                           |                                                   |                                                                |
|      | Stem rust Puccinia graminis                                                                       |                                                  |                                                           |                                                   |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development. To maximize yields in cereals, protect the flag leaf. Apply **Headline SC** immediately after flag-leaf emergence for optimum results.

**Headline SC** does not control Fusarium head blight (head scab) or prevent reductions in grain quality that can result from this disease. When head blight is a concern, manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

**DO NOT** harvest oat hay or feed green-chopped oats within 14 days of last application.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

\*For early season control of leaf blotch, Septoria blotch and stem rot, and spot blotch when conditions favor disease development, apply 3 to 6 fl ozs per acre of **Headline SC** either in combination with a herbicide application or when conditions favor disease development. When the 3 to 6 fl ozs early season application rate is used, a second application of **Headline SC** may be required to protect the emerged flag leaf. Environmental conditions for disease or current disease pressure at the time of flag-leaf emergence should be used to determine the **Headline SC** rate for the second application. For high disease pressure, use the higher rate of **Headline SC**. Early season control is not registered for use in California.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop                       | Target Disease                               | Product Rate per Application (fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|----------------------------|----------------------------------------------|-----------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Oilseed Crops<br>Flax seed | Pasmo<br>Septoria linicola                   | 6 to 12                                 | 2                                                         | 24<br>(0.39 lb                                    | 21                                                             |
| Rapeseed                   | Blackleg<br>Leptosphaeria maculans           |                                         |                                                           | ai/acre)                                          |                                                                |
|                            | Blackspot  Alternaria spp.                   |                                         |                                                           |                                                   |                                                                |
| Safflower                  | Alternaria spp.                              |                                         |                                                           |                                                   |                                                                |
| Sesame                     | Septoria spp.                                |                                         |                                                           |                                                   |                                                                |
| Sunflower                  | Alternaria leaf spot <i>Alternaria</i> spp.  |                                         |                                                           |                                                   |                                                                |
|                            | Cercospora leaf spot<br>Cercospora helianthi |                                         |                                                           |                                                   |                                                                |
|                            | Downy mildew Plasmopara halstedii            |                                         |                                                           |                                                   |                                                                |
|                            | Powdery mildew Erysiphe cichoracearum        |                                         |                                                           |                                                   |                                                                |
|                            | Rust Puccinia helianthi, Uromyces spp.       |                                         |                                                           |                                                   |                                                                |
|                            | Septoria leaf spot<br>Septoria spp.          |                                         |                                                           |                                                   |                                                                |
|                            | White rust Albugo tragopogonis               |                                         |                                                           |                                                   |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

**Flax seed.** Apply **Headline SC** at mid-flowering (7 to 10 days after flower initiation). Make a second application 7 to 10 days later if disease persists or if weather conditions are favorable for disease development.

**Rapeseed. For control of blackleg**, apply **Headline SC** at 2- to 4-leaf stage. **For control of blackspot**, apply **Headline SC** at early pod development. A second application 7 to 10 days later can be made if disease persists or if weather conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

**Headline SC** can be used with adjuvants in oilseed crops. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.39 lb ai pyraclostrobin (24 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a **non-Group 11** fungicide with a different mode of action.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop   | Target Disease                                                                                                                                                                                                                                                | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year*<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| Peanut | Early leaf spot Cercospora arachidicola  Late leaf spot Cercosporidium personatum  Pepperspot Leptosphaerulina crassiasca  Rust Puccinia arachidis  Web blotch Phoma arachidicola  Rhizoctonia limb rot, Peg rot, Pod rot Rhizoctonia solani  Sclerotium rot, | 6 to 15<br>(see details<br>below)                | 2                                                         | 45<br>(0.73 lbs<br>ai/acre)                        | 14                                                             |
|        | Southern stem rot, Southern blight, and White mold Sclerotium rolfsii  Suppression Only: Sclerotinia blight Sclerotinia minor                                                                                                                                 |                                                  |                                                           |                                                    |                                                                |
|        | Cylindrocladium black rot Cylindrocladium crotalariae                                                                                                                                                                                                         | 12 to 15                                         |                                                           |                                                    |                                                                |

Application Directions. For control of early and late leaf spot, pepperspot, rust, and web blotch, begin Headline SC applications prior to disease development and continue on a 14- to 21-day interval. When using a 14-day spray interval, apply Headline SC at 6 to 12 fluid ounces per acre. At spray intervals between 14 and 21 days, apply Headline SC at 9 to 15 fluid ounces per acre.

**For control of Rhizoctonia and Sclerotium**, begin **Headline SC** applications prior to disease development and continue on a 14- to 28-day interval. For intervals greater than 14 days, use 15 fluid ounces per acre.

Use the higher rate and/or shorter spray interval when disease pressure is high or in fields with a history of disease.

**Headline SC** can be used with adjuvants in peanut; however, mixes with silicone-containing adjuvants may cause crop injury under certain conditions. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

Peanut meal can be fed. **DO NOT** graze or harvest for forage use.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.73 lbs ai pyraclostrobin (45 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action. In spray programs where four (4) or less fungicide applications are made in a year, **Headline SC** should be alternated with at least one (1) application of a labeled **non-Group 11** fungicide with a different mode of action.

\*The maximum product rate per year includes the combination of in-furrow and foliar uses.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

## Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia and the Suppression of Soilborne Fusarium Species in Peanut\*

| Rate per                         | Headline SC Rate (fl ozs/A)  |                              |                              |                              |                              |                              |                 |              |              |  |
|----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------|--------------|--------------|--|
| 1000 row feet<br>(fl oz product) | 15-inch rows                 | 20-inch rows                 | 22-inch rows                 | 30-inch rows                 | 32-inch rows                 | 34-inch rows                 | 36-inch<br>rows | 38-inch rows | 40-inch rows |  |
| 0.1                              | 3.5                          |                              |                              |                              |                              |                              |                 |              |              |  |
| 0.2                              | 7.0                          | 5.2                          | 4.7                          | 3.5                          | 3.3                          | 3.2                          | 3.0             |              |              |  |
| 0.3                              | 10.5                         | 7.8                          | 7.1                          | 5.2                          | 5.0                          | 4.8                          | 4.5             | 4.3          | 4.0          |  |
| 0.4                              | see<br>footnote <sup>1</sup> | 10.4                         | 9.5                          | 6.9                          | 6.7                          | 6.4                          | 6.0             | 5.7          | 5.4          |  |
| 0.5                              | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 11.8                         | 8.7                          | 8.4                          | 8.0                          | 7.5             | 7.1          | 6.7          |  |
| 0.6                              | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 10.4                         | 10.0                         | 9.6                          | 9.0             | 8.5          | 8.1          |  |
| 0.7                              | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 11.7                         | 11.2                         | 10.5            | 10.0         | 9.4          |  |
| 0.8                              | see<br>footnote <sup>1</sup> | 12.0            | 11.4         | 10.8         |  |

**Application Directions.** Use 0.1 to 0.8 fl oz of **Headline SC** per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.

When Rhizoctonia or Fusarium seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use **Headline SC** at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.

**DO NOT** apply more than 12 fl ozs per acre of **Headline SC** for peanut in-furrow use.

<sup>\*</sup> Not for in-furrow use in California.

<sup>&</sup>lt;sup>1</sup> For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet.

For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet.

For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.

For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet.

For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.

**Table 2. Headline® SC fungicide Crop-specific Requirements** (continued)

| Crop  | Target Disease                     | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|-------|------------------------------------|--------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Pecan | Pecan scab Cladosporium caryigenum | 6 to 7                                           | 2                                                         | 28<br>(0.46 lb<br>ai/acre)                        | 14                                                             |

**Application Directions.** Begin **Headline SC** applications prior to disease development and continue on a 14-day interval. For optimum performance, apply **Headline SC** early in the spray program (e.g. prepollination and first cover).

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.46 lb ai pyraclostrobin (28 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop   | Target Disease                                                                      | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year*<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|--------|-------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| Potato | Black dot Colletotrichum coccodes Early blight Alternaria solani                    | 6 to 9                                           | 1                                                         | 72<br>(1.18 lbs<br>ai/acre)                        | 3                                                              |
|        | Late blight Phytophthora infestans Powdery mildew Erysiphe spp., Leveillula taurica | 6 to 12                                          |                                                           |                                                    |                                                                |
|        | Suppression Only: White mold Sclerotinia sclerotiorum                               |                                                  |                                                           |                                                    |                                                                |

**Application Directions.** Begin **Headline SC** applications at 7- to 14-day intervals prior to disease development. The low rate and longer interval can be used early season prior to the observance of symptoms and when disease pressure is low. **For control of late blight**, follow **Headline SC** application with a labeled **non-Group 11** fungicide with a different mode of action 5 to 7 days later.

Use the higher rates and shorter intervals once disease has been confirmed in your area or weather conditions are favorable to disease development.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 1.18 lbs ai pyraclostrobin (72 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than one (1) **Headline SC** application before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

\*The maximum product rate per year includes the combination of in-furrow and foliar uses.

#### In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Potatoes

Use 0.4 to 0.8 fl oz of **Headline SC** per 1000 row feet. For applications on 32-inch or 34-inch rows, the maximum application rate is 0.73 fl oz/1000 row feet. Apply at planting as an in-furrow spray by directing spray pattern to uniformly cover seed pieces and surrounding soil. The spray pattern must be a 4- to 8-inch band applied to the seed piece prior to being covered with soil.

When Rhizoctonia disease pressure conditions are expected to be severe or if the field has a history of Rhizoctonia infestations, use **Headline SC** at 0.6 to 0.8 fl oz per 1000 row feet and/or tank mix with a fungicide having a different mode of action.

**DO NOT** apply more than 12 fl ozs per acre of **Headline SC**.

Use a minimum volume of application of 5 gallons of water per acre.

| Headline SC Rate per 1000 row feet     | Headline SC Rate (fl ozs/A) |                     |                |              |              |  |  |
|----------------------------------------|-----------------------------|---------------------|----------------|--------------|--------------|--|--|
| (fl oz product)                        | 32-inch rows                | 34-inch rows        | 36-inch rows   | 38-inch rows | 40-inch rows |  |  |
| 0.4                                    | 6.7                         | 6.4                 | 6.0            | 5.7          | 5.4          |  |  |
| 0.6                                    | 10.0                        | 9.6                 | 9.0            | 8.6          | 8.1          |  |  |
| 0.8                                    | see footnote <sup>1</sup>   | see footnote1       | 12.0           | 11.4         | 10.8         |  |  |
| <sup>1</sup> For 32-inch or 34-inch ro | ws, use a maximu            | m of 0.73 fl oz per | 1000 row feet. |              |              |  |  |

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop | Target Disease                                                  | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days)               |
|------|-----------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------|
| Rye  | Leaf rust Puccinia recondita  Leaf spot Pyrenophora spp.        | 6 to 9*                                          | 2                                                         | 18<br>(0.29 lb<br>ai/acre)                        | Apply no later<br>than 50% head<br>emergence<br>(Feekes 10.3,<br>Zadok's 55) |
|      | Powdery mildew Erysiphe graminis                                |                                                  |                                                           |                                                   | Zadok o coj                                                                  |
|      | Septoria leaf and glume blotch Septoria spp., Stagonospora spp. |                                                  |                                                           |                                                   |                                                                              |
|      | Stem rust Puccinia graminis                                     |                                                  |                                                           |                                                   |                                                                              |
|      | Stripe rust Puccinia striiformis                                |                                                  |                                                           |                                                   |                                                                              |

**Application Directions.** Begin **Headline SC** applications prior to disease development. To maximize yields in cereals, protect the flag leaf. Apply **Headline SC** immediately after flag-leaf emergence for optimum results.

**Headline SC** does not control Fusarium head blight (head scab) or prevent the reductions in grain quality that can result from this disease. When head blight is a concern, manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

\*For early season control of leaf spot and Septoria leaf and glume blotch when conditions favor disease development, apply 3 to 6 fl ozs per acre of **Headline SC** either in combination with a herbicide application or when conditions favor disease development. When the 3 to 6 fl ozs early season application rate is used, a second application of **Headline SC** may be required to protect the emerged flag leaf. Environmental conditions for disease or current disease pressure at the time of flag-leaf emergence should be used to determine the **Headline SC** rate for the second application. For high disease pressure, use the higher rate of **Headline SC**. Early season control is not registered for use in California.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop    | Target Disease                               | Product Rate per Application (fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|---------|----------------------------------------------|-----------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Sorghum | Anthracnose<br>Colletotrichum<br>graminocola | 6 to 12                                 | 1                                                         | 12<br>(0.20 lb<br>ai/acre)                        | Apply no later<br>than 25%<br>flowering                        |
|         | Gray leaf spot<br>Cercospora spp.            |                                         |                                                           |                                                   |                                                                |
|         | Northern leaf blight<br>Exserohilum turcicum |                                         |                                                           |                                                   |                                                                |
|         | Rust <i>Puccinia</i> spp.                    |                                         |                                                           |                                                   |                                                                |
|         | Southern leaf blight<br>Bipolaris spp.       |                                         |                                                           |                                                   |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development.

Use the higher rate when disease pressure is high.

Under high disease pressure for Northern leaf blight and Southern leaf blight, apply 9 to 12 fl ozs per acre.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.20 lb ai/acre pyraclostrobin (12 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than one (1) **Headline SC** application per year. If additional fungicide applications are needed, use a labeled **non-Group 11** fungicide with a different mode of action.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop    | Target Disease                                       | Product Rate per Application (fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year*<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|---------|------------------------------------------------------|-----------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| Soybean | Alternaria leaf spot  Alternaria spp.                | 6 to 12                                 | 2                                                         | 24<br>(0.39 lb                                     | 21                                                             |
|         | Anthracnose Colletotrichum truncatum                 |                                         |                                                           | ai/acre)                                           |                                                                |
|         | Asian soybean rust Phakopsora pachyrhizi             |                                         |                                                           |                                                    |                                                                |
|         | Brown spot<br>Septoria glycines                      |                                         |                                                           |                                                    |                                                                |
|         | Cercospora blight Cercospora kikuchii                |                                         |                                                           |                                                    |                                                                |
|         | Frogeye leaf spot<br>Cercospora sojina               |                                         |                                                           |                                                    |                                                                |
|         | Pod and stem blight Diaporthe phaseolorum            |                                         |                                                           |                                                    |                                                                |
|         | Rhizoctonia aerial blight<br>Rhizoctonia solani      |                                         |                                                           |                                                    |                                                                |
|         | Suppression Only: Southern blight Sclerotium rolfsii | 12                                      |                                                           |                                                    |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

For control of soybean rust, apply **Headline SC** prior to infection.

**Headline SC** can be used with adjuvants in soybeans. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

Soybean forage can be fed no sooner than 14 days after last application.

Soybean hay can be fed no sooner than 21 days after last treatment.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.39 lb ai pyraclostrobin (24 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

\*The maximum product rate per year includes the combination of in-furrow and foliar uses.

 Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

## Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia and the Suppression of Soilborne Fusarium Species in Soybean\*

| Rate per                         | Headline SC Rate (fl ozs/A)  |                              |                              |                              |                              |                              |                 |              |                 |  |  |
|----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------|--------------|-----------------|--|--|
| 1000 row feet<br>(fl oz product) | 15-inch rows                 | 20-inch rows                 | 22-inch rows                 | 30-inch rows                 | 32-inch rows                 | 34-inch rows                 | 36-inch<br>rows | 38-inch rows | 40-inch<br>rows |  |  |
| 0.1                              | 3.5                          |                              |                              |                              |                              |                              |                 |              |                 |  |  |
| 0.2                              | 7.0                          | 5.2                          | 4.7                          | 3.5                          | 3.3                          | 3.2                          | 3.0             |              |                 |  |  |
| 0.3                              | 10.5                         | 7.8                          | 7.1                          | 5.2                          | 5.0                          | 4.8                          | 4.5             | 4.3          | 4.0             |  |  |
| 0.4                              | see<br>footnote <sup>1</sup> | 10.4                         | 9.5                          | 6.9                          | 6.7                          | 6.4                          | 6.0             | 5.7          | 5.4             |  |  |
| 0.5                              | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 11.8                         | 8.7                          | 8.4                          | 8.0                          | 7.5             | 7.1          | 6.7             |  |  |
| 0.6                              | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 10.4                         | 10.0                         | 9.6                          | 9.0             | 8.5          | 8.1             |  |  |
| 0.7                              | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 11.7                         | 11.2                         | 10.5            | 10.0         | 9.4             |  |  |
| 0.8                              | see<br>footnote <sup>1</sup> | 12.0            | 11.4         | 10.8            |  |  |

**Application Directions.** Use 0.1 to 0.8 fl oz of **Headline SC** per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.

When Rhizoctonia or Fusarium seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use **Headline SC** at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.

**DO NOT** apply more than 12 fl ozs per acre in-furrow of **Headline SC**.

<sup>\*</sup> Not for in-furrow use in California.

<sup>&</sup>lt;sup>1</sup> For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet.

For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet.

For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.

For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet.

For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop                                         | Target Disease                                                                  | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|----------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Succulent Shelled Peas and Beans Pigeon pea  | Alternaria leaf and pod spot  Alternaria spp.  Anthracnose  Colletotrichum spp. | 6 to 9                                           | 2                                                         | 18<br>(0.29 lb<br>ai/acre)                        | 7                                                              |
| Vigna spp. Black-eyed pea Cowpea             | Ascochyta blight Phoma exigua, Ascochyta spp.                                   |                                                  |                                                           |                                                   |                                                                |
| Pisum spp. Broad bean English pea Garden pea | Asian soybean rust Phakopsora pachyrhizi Cercospora leaf spot Cercospora spp.   |                                                  |                                                           |                                                   |                                                                |
| Green pea  Phaseolus spp. Lima bean,         | Downy mildew Phytophthora nicotianae, P. phaseoli                               |                                                  |                                                           |                                                   |                                                                |
| green                                        | Mycosphaerella blight Mycosphaerella spp. Powdery mildew Erysiphe polygoni      |                                                  |                                                           |                                                   |                                                                |
|                                              | Rust Uromyces appendiculatus                                                    |                                                  |                                                           |                                                   |                                                                |

**Application Directions.** Begin **Headline SC** applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

Bean forage, bean hay, pea vines, and pea hay may be fed no sooner than 14 days after last application.

**Headline SC** can be used with adjuvants in succulent shelled peas and beans. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop                              | Target Disease                                                         | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year*<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|-----------------------------------|------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| Sugar Beet<br>(roots and<br>tops) | Cercospora leaf spot Cercospora beticola Powdery mildew Erysiphe betae | 9 to 12                                          | 2                                                         | 48<br>(0.78 lb<br>ai/acre)                         | 7                                                              |

**Application Directions.** Begin **Headline SC** applications prior to disease development and continue on a 14-day interval.

Use the higher rate when disease pressure is high.

**Headline SC** applications will aid in the control of Rhizoctonia stem canker and crown rot.

In sugar beet, **Headline SC** can be combined with low rates of crop oil concentrate (COC), methylated seed oil (MSO), and nonionic surfactant (NIS) adjuvants. **DO NOT** use silicone-containing adjuvants. Some combinations and rates may result in temporary crop injury.

**Headline SC Tank Mixes. Headline SC** can be tank mixed with herbicides such as **Poast® herbicide**, **Select® herbicide**, **Assure® II herbicide** or **Prism® herbicide** for postemergence control of grasses in sugar beet. **DO NOT** use silicone-based adjuvants in such combinations. **Headline SC** tank mix combinations can include COC or MSO; however, crop injury may result. The level of injury tends to increase with increasing rates of COC or MSO.

See Additives and Tank Mixing Information and Mixing Order sections for more details.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.78 lb ai pyraclostrobin (48 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than one (1) **Headline SC** application before the 4-leaf stage of plant growth. After the 4-leaf stage of plant growth, **DO NOT** make more than (1) **Headline SC** application before alternating to a **non-Group 11** fungicide with a different mode of action.

\*The maximum product rate per year includes the combination of in-furrow and foliar uses.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Instructions fo                  | Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Sugar Beet |                              |                              |                              |                              |                              |              |              |              |  |  |
|----------------------------------|---------------------------------------------------------------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--------------|--------------|--------------|--|--|
| Rate per                         |                                                                                             | Headline SC Rate  (fl ozs/A) |                              |                              |                              |                              |              |              |              |  |  |
| 1000 row feet<br>(fl oz product) | 15-inch<br>rows                                                                             | 20-inch<br>rows              | 22-inch rows                 | 30-inch<br>rows              | 32-inch<br>rows              | 34-inch<br>rows              | 36-inch rows | 38-inch rows | 40-inch rows |  |  |
| 0.1                              | 3.5                                                                                         |                              |                              |                              |                              |                              |              |              |              |  |  |
| 0.2                              | 7.0                                                                                         | 5.2                          | 4.7                          | 3.5                          | 3.3                          | 3.2                          | 3.0          |              |              |  |  |
| 0.3                              | 10.5                                                                                        | 7.8                          | 7.1                          | 5.2                          | 5.0                          | 4.8                          | 4.5          | 4.3          | 4.0          |  |  |
| 0.4                              | see<br>footnote <sup>1</sup>                                                                | 10.4                         | 9.5                          | 6.9                          | 6.7                          | 6.4                          | 6.0          | 5.7          | 5.4          |  |  |
| 0.5                              | see<br>footnote <sup>1</sup>                                                                | see<br>footnote <sup>1</sup> | 11.8                         | 8.7                          | 8.4                          | 8.0                          | 7.5          | 7.1          | 6.7          |  |  |
| 0.6                              | see<br>footnote <sup>1</sup>                                                                | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 10.4                         | 10.0                         | 9.6                          | 9.0          | 8.5          | 8.1          |  |  |
| 0.7                              | see<br>footnote <sup>1</sup>                                                                | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 11.7                         | 11.2                         | 10.5         | 10.0         | 9.4          |  |  |
| 0.8                              | see<br>footnote <sup>1</sup>                                                                | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | see<br>footnote <sup>1</sup> | 12.0         | 11.4         | 10.8         |  |  |

**Application Directions.** Use 0.1 to 0.8 fl oz of **Headline SC** per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.

When Rhizoctonia seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use **Headline SC** at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.

#### **DO NOT** apply more than 12 fl ozs per acre of **Headline SC**.

<sup>&</sup>lt;sup>1</sup> For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet.

For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet.

For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.

For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet.

For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.

**Table 2. Headline® SC fungicide Crop-specific Requirements** (continued)

| Crop       | Target Disease                                                 | Product<br>Rate per<br>Application<br>(fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|------------|----------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|
| Sugarcane* | Brown Rust Puccinia melanocephala Orange Rust Puccinia kuehnii | 9 to 12                                          | 2                                                         | 48<br>(0.78)                                      | 14                                                             |

**Application Directions.** For optimal disease control, begin applications of **Headline SC** prior to disease development and continue on a 14 to 28 day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** apply more than 48 ozs of **Headline SC** per acre per year. **DO NOT** make more than two (2) sequential applications of **Headline SC** before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

<sup>\*</sup> Not for use in California.

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop                                                                                                                                                                                                                             | Target Disease                                                                                                                                                                                             | Product Rate per Application (fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year*<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| Tuberous and Corm Vegetables Subgroup Arracacha Arrowroot Chinese artichoke Jerusalem artichoke Cassava (bitter and sweet) Chayote (root) Chufa Dasheen Edible canna Ginger Leren Sweet potato Tanier True yam Turmeric Yam bean | Downy mildew Plasmopara spp.  Leaf spot Cercospora spp., Alternaria spp.  Powdery mildew Erysiphae spp., Leveillula taurica  Rust Uromyces spp., Puccinia spp.                                             | 6 to 12                                 | 1                                                         | 72<br>(1.18 lbs<br>ai/acre)                        | 3                                                              |
| Potato                                                                                                                                                                                                                           | Black dot Colletotrichum coccodes Early blight Alternaria solani Late blight Phytophthora infestans Powdery mildew Erysiphe spp., Leveillula taurica Suppression Only: White mold Sclerotinia sclerotiorum | 6 to 9                                  |                                                           |                                                    |                                                                |

**Application Directions.** Begin **Headline SC** applications at 7- to 14-day intervals prior to disease development. The low rate and longer interval can be used early season prior to the observance of symptoms and when disease pressure is low. **For control of late blight**, follow **Headline SC** application with a labeled fungicide with a different mode of action 5 to 7 days later.

Use the higher rates and shorter intervals once disease has been confirmed in your area or if weather conditions are favorable for disease development.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 1.18 lbs ai pyraclostrobin (72 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than one (1) **Headline SC** application before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

<sup>\*</sup>The maximum product rate per year includes the combination of in-furrow and foliar uses. (For above-listed crops, in-furrow use is permitted in potato only.)

#### In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Potatoes

Use 0.4 to 0.8 fl oz of **Headline® SC fungicide** per 1000 row feet. For applications on 32-inch or 34-inch rows, the maximum application rate is 0.73 fl oz/1000 row feet. Apply at planting as an in-furrow spray by directing spray pattern to uniformly cover seed pieces and surrounding soil. The spray pattern must be a 4- to 8-inch band applied to the seed piece prior to being covered with soil.

When Rhizoctonia disease pressure conditions are expected to be severe or if the field has a history of Rhizoctonia infestations, use **Headline SC** at 0.6 to 0.8 fl oz per 1000 row feet and/or tank mix with a fungicide having a different mode of action.

**DO NOT** apply more than 12 fl ozs per acre of **Headline SC**.

Use a minimum volume of application of 5 gallons of water per acre.

| Headline SC Rate per 1000 row feet                                                       | Headline SC Rate (fl ozs/A) |                           |              |              |              |  |  |
|------------------------------------------------------------------------------------------|-----------------------------|---------------------------|--------------|--------------|--------------|--|--|
| (fl oz product)                                                                          | 32-inch rows                | 34-inch rows              | 36-inch rows | 38-inch rows | 40-inch rows |  |  |
| 0.4                                                                                      | 6.7                         | 6.4                       | 6.0          | 5.7          | 5.4          |  |  |
| 0.6                                                                                      | 10.0                        | 9.6                       | 9.0          | 8.6          | 8.1          |  |  |
| 0.8                                                                                      | see footnote <sup>1</sup>   | see footnote <sup>1</sup> | 12.0         | 11.4         | 10.8         |  |  |
| <sup>1</sup> For 32-inch or 34-inch rows, use a maximum of 0.73 fl oz per 1000 row feet. |                             |                           |              |              |              |  |  |

Table 2. Headline® SC fungicide Crop-specific Requirements (continued)

| Crop                   | Target Disease                                                   | Product Rate per Application (fl ozs/A) | Maximum<br>Number of<br>Sequential Foliar<br>Applications | Maximum<br>Product Rate<br>per Year<br>(fl ozs/A) | Minimum Time<br>from Application<br>to Harvest<br>(PHI) (days)        |
|------------------------|------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------|
| Wheat and<br>Triticale | Black point Kernel smudge Alternaria spp., Helminthosporium spp. | 6 to 9*                                 | 2                                                         | 18<br>(0.29 lb<br>ai/acre)                        | Apply no later<br>than the beginning<br>of flowering<br>(Feekes 10.5, |
|                        | Leaf rust Puccinia triticina                                     |                                         |                                                           |                                                   | Zadok's 59)                                                           |
|                        | Powdery mildew Erysiphe graminis f. sp., tritici                 |                                         |                                                           |                                                   |                                                                       |
|                        | Septoria leaf and glume blotch Septoria spp., Stagonospora spp.  |                                         |                                                           |                                                   |                                                                       |
|                        | Spot blotch Cochliobolus sativus                                 |                                         |                                                           |                                                   |                                                                       |
|                        | Stem rust Puccinia graminis f. sp., tritici                      |                                         |                                                           |                                                   |                                                                       |
|                        | Stripe rust  Puccinia striiformis f. sp.,  tritici               |                                         |                                                           |                                                   |                                                                       |
|                        | Tan spot Yellow leaf spot Pyrenophora spp.                       |                                         |                                                           |                                                   |                                                                       |

**Application Directions.** Begin **Headline SC** applications prior to disease development. To maximize yields in cereals, protect the flag leaf. Apply **Headline SC** immediately after flag-leaf emergence for optimum results.

**Headline SC** does not control Fusarium head blight (head scab) or prevent the reductions in grain quality that can result from this disease. When head blight is a concern, manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

**DO NOT** harvest wheat hay or feed green-chopped wheat within 14 days after last application.

**Resistance Management.** To limit development of resistance, **DO NOT** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs **Headline SC**) per acre per year.

**DO NOT** make more than two (2) sequential **Headline SC** applications before alternating to a labeled **non-Group 11** fungicide with a different mode of action.

\* For early season control of tan spot, Septoria leaf and glume blotch, and spot blotch when conditions favor disease development, apply 3 to 6 fl ozs per acre of **Headline SC** either in combination with a herbicide application or when conditions favor disease development. When the 3 to 6 fl ozs early season application rate is used, a second application of **Headline SC** may be required to protect the emerged flag leaf. Environmental conditions for disease or current disease pressure at the time of flag-leaf emergence should be used to determine the **Headline SC** rate for the second application. For high disease pressure, use the higher rate of **Headline SC**. Early season control is not registered for use in California.

#### **Conditions of Sale and Warranty**

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF Agricultural Solutions US LLC ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

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