7969-186 07/31/2006 1/34

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060, Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☑ Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
File Sybmol 7969-186	Tony Kish	☑ None ☐ Restricted
4. Company/Product (Name)	**PM#**	
Headline Fungicide	22	

5. Name and Address of Applicant *(Include ZIP Code)*
BASF Corporation, Agricultural Products
P.O. Box 13528
Research Triangle Park, NC 27709
☐ *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:
EPA Reg. No. _____
Product Name _____

Section - II

☐ Amendment - Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in reponse to *Agency letter dated*
☐ "Me Too" Application.
☐ Other - Explain below.

~~NOTIFICATION~~
JUL 3 1 2006

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification, to re-insert text approved by EPA on prior label version pertaining to use in sunflower, and inadvertently omitted when an updated label version was submitted to EPA.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	☐ Metal ☑ Plastic ☐ Glass ☐ Paper ☐ Other (Specify) _____
* *Certification must be submitted*	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☑ Label ☐ Container	1 pint, 1 gallon, 2 1/2 gallon	☑ on label

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☐ *Paper glued* ☐ Stenciled ☑ Other sleeve

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Charlotte A. Sanson	Product Registration Manager	(919) 547-2983

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title
Charlotte A Sanson	Product Registration Manager
4. Typed Name	**5. Date**
Charlotte A. Sanson	July 13, 2006

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BASF
The Chemical Company

GROUP	11	FUNGICIDE

NOTIFICATION
JUL 31 2006

Headline®
fungicide

For use in disease control and plant health in the following crops:

Barley, citrus fruit, corn (all types), dried shelled peas & beans, edible podded legume vegetables, grass grown for seed, mint, peanut, pecan, rye, soybean, succulent shelled peas and beans, sugar beet, sunflower, tuberous and corm vegetables, wheat, and triticale.

Active Ingredient:*	
Pyraclostrobin (carbamic acid, [2-[[[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxy]methyl]phenyl]methoxy-, methyl ester)	23.6%
Other Ingredients:**	76.4%
Total:	100.0%

* Equivalent to 2.09 pounds of pyraclostrobin per gallon
** Contains petroleum distillates

EPA Reg. No. 7969-186 **EPA Est. No. _____**

KEEP OUT OF REACH OF CHILDREN.

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 inside booklet for complete **First Aid, Precautionary Statements, Directions For Use**, and **Conditions of Sale and Warranty**.

No aerial application in New York State except as permitted under FIFRA Section 24(c), Special Local Needs Registration.

Net contents: _____

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

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FIRST AID	
If swallowed	•Call a poison control center or doctor immediately for treatment advice. •Have person sip a glass of water if able to swallow. •**DO NOT** induce vomiting unless told to do so by a poison control center or doctor. •**DO NOT** give anything by mouth to an unconscious person.
If on skin or clothing	•Take off contaminated clothing. •Rinse skin immediately with plenty of water for 15-20 minutes. •Call a poison control center or doctor for treatment advice.
If in eyes	•Hold eye open and rinse slowly and gently with water for 15-20 minutes. •Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. •Call a poison control center or doctor for treatment advice.
If inhaled	•Move person to fresh air. •If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. •Call a poison control center or doctor for further treatment advice.
Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.	
HOT LINE 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 Corporation 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 substantial but temporary eye injury. Causes skin irritation. Harmful if absorbed through skin. 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:

- Coveralls over short-sleeved shirt and short pants
- Protective eyewear (goggles, face shield, or safety glasses)
- Socks
- Chemical-resistant footwear
- 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, 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 immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This 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 forecasted 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 wash waters or rinsate.

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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, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours** for all crops except when performing bare-hand detasseling or hand harvesting in treated corn. REI for bare-hand detasseling activities and hand harvesting in corn is **7 days**. Notify workers of the exception. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves, made of any waterproof material (such as nitrile, butyl, neoprene, and/or barrier laminate)
- Shoes plus socks

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. 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.

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 Disposal: Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

In Case of Spill

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

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

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

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 re-use. Keep the spill out of all sewers and open bodies of water.

I. General Information

This package contains **Headline® fungicide**, an emulsifiable concentrate (EC). The active ingredient in **Headline**, pyraclostrobin, is a member of the **strobilurin class of chemistry** and is derived from a natural antifungal substance. Preventative applications optimize disease control resulting in improved plant health. To maximize disease control, apply **Headline** in a regularly scheduled protective spray program and use in a rotation program with other fungicides.

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

Headline is not for use in greenhouse or transplant production.

Mode of Action

Pyraclostrobin, the active ingredient of **Headline** belongs to the group of respiration inhibitors classified by the U.S. EPA and Canada PMRA as Quinone Outside Inhibitors (QoI), or Target Site of Action **Group 11** fungicides.

Resistance Management

Headline contains pyraclostrobin, a **Group 11** fungicide, and is effective against pathogens resistant to fungicides with modes of action different from those of QoI fungicides (Target site **Group 11**), such as for example, dicarboximides, sterol inhibitors, benzimidazoles, or phenylamides.

Fungal isolates resistant to **Group 11** fungicides, such as pyraclostrobin, azoxystrobin, trifloxystrobin, and kresoxim-methyl, may 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 may result in reduction of disease control by **Headline** or other **Group 11** fungicides.

To maintain the performance of **Headline** in the field, **DO NOT** exceed the total number of sequential applications of **Headline** and the total number of applications of

Headline® fungicide per season stated in **Sections V.** and **VI.** Adhere to the label instructions regarding the consecutive use of **Headline** or other target site of action **Group 11** fungicides that have a similar site of action on the same pathogens.

The following recommendations may be considered to delay the development of fungicide resistance:

1. Tank mixtures: Use tank mixtures with 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.

BASF recommends using at least the minimum labeled rates of each fungicide in the tank mix.

2. IPM: Headline should be integrated into an overall disease and pest management program. Cultural practices known to reduce disease development should be followed. Consult your local extension specialist, certified crop advisor and/or BASF representative for additional IPM strategies established for your area. **Headline** may 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**, 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.

Cleaning Spray Equipment
Spraying 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**.

II. Application Instructions

Apply recommended rates of **Headline** as instructed by **Section VI. Crop-Specific Recommendations.** Apply **Headline** with ground sprayer, aerial equipment or through sprinkler irrigation equipment. Equipment should be checked frequently for calibration.

Under low-level disease conditions, the minimum application rates can be used while maximum application rates and shortened spray schedules are recommended for severe or threatening disease conditions.

Ground Application: Apply **Headline** in sufficient water to ensure thorough coverage of foliage, blooms, and fruit. Thorough coverage is required for optimum disease control.

Aerial Application: 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 Corn and Soybeans: Aerial applications of **Headline** may be made to corn and soybeans in water volumes of 2 or more gallons of spray solution per acre (gpa). For application volumes of 2 to 5 gpa, the spray solution must contain crop oil with emulsifier properties at a rate of 0.5-1.0 pt/acre. The higher oil rate is recommended when weather conditions become less conducive to spray droplets reaching the target; air temperature >85° F or relative humidity <60%, or when application volume is less than or equal to 3 gpa. For applications of 5 *gpa or more use an approved adjuvant at standard rates* (example: NIS at 1-2 pints/100 gallons of spray mix (0.125-0.25%v/v)). Select spray nozzles, pumping pressure, and sprayer height to provide medium to 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 assure proper droplet size and canopy penetration.

No aerial application in New York State except as permitted under FIFRA Section 24(c), Special Local Needs Registration.

Spray Drift Management
DO NOT spray when conditions favor drift beyond area intended for application. Conditions which 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-and-weather-related factors determine 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.

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 outer most nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.
2. 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 should be observed.The applicator should be familiar with and

take into account the information covered in 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
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. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Local terrain can influence wind patterns. Every applicator should 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 should 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 non-target 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 should be thoroughly cleaned. Flush system with clean water.

Application Instructions:
Apply **Headline® fungicide** at rates and timings as described in this label.

Use Precautions for Sprinkler Irrigation Applications:
- 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 non-continuous moving systems, inject the product water mixture in the last 15-30 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 non-uniform distribution of treated water. Thorough coverage of foliage is required for good control. Good agitation should be maintained during the entire application period.
- If you have questions about calibration you should contact State Extension Service specialists, equipment manufacturers or other experts.
- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source

contamination from backflow.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under 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 greenhouse 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:

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, 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 should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

III. Additives and General Tank Mixing Information

Headline® fungicide can be tank mixed with most recommended fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives as specified in **Section VI. Crop Specific Recommendations.**

Under some conditions, the use of additives or adjuvants may improve the performance of **Headline**. 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 may result from mixing **Headline** 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.

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

IV. Mixing Order

1) **Water**. Begin by agitating a thoroughly clean sprayer tank three-quarters 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 dry flowables, wettable powders, suspension concentrates, or suspo-emulsions).
6) **Water-soluble products**.
7) **Emulsifiable concentrates** (such as **Headline**, or oil concentrates when applicable).
8) **Water-soluble additives** (such as AMS or UAN when applicable).
9) **Remaining quantity of water**.

Make sure that each component is thoroughly mixed

and suspended before adding tank mix partners. Maintain constant agitation during application. See **Section VI. Crop-Specific Recommendations** for more details.

V. General Restrictions and Limitations-All Crops

- **Maximum seasonal use rate: DO NOT** apply more than the maximum rate per acre per season as listed in **Table A. Crop-Specific Restrictions and Limitations** and **Section VI. Crop-Specific Recommendations.**
- **Maximum rate per application: DO NOT** apply more than the maximum rate per acre per application as listed in **Table A. Crop-Specific Restrictions and Limitations** and **Section VI. Crop-Specific Recommendations.**
- **DO NOT** make more than the total number of applications of **Headline® fungicide** per season, as listed in **Table A. Crop-Specific Restrictions and Limitations** and not exceeding the maximum seasonal use rate.

  Also see **Section VI. Crop-Specific Recommendations.**
- **Pre-harvest Interval (PHI):** See **Table A. Crop-Specific Restrictions and Limitations** and **Section VI. Crop-Specific Recommendations.**
- **Headline** is not for use in greenhouse or transplant production.

Crop Rotation Restriction: Crops listed on the **Headline, Cabrio® EG fungicide** and **Pristine® fungicide** labels may be planted immediately following the last application.

All other crops can be planted 14 days after the last application.

Instructions for Directed or Banded Sprays Related to Ground Applications

The application rates shown in the following tables pertain to both aerial and ground (broadcast) methods of application. **Headline** may also be applied as a directed or banded spray over the rows or plant beds with alleys or row-middles left upsprayed. For such uses the labeled **Headline** recommendation should be reduced in proportion to the area actually sprayed. This adjustment is necessary to avoid applying the product at use rates higher than permitted according to label recommendations.

The following formula may be used to determine the broadcast equivalent rate for doing directed or banded sprays:

sprayed bed width + unsprayed row middles = total row width

$$\frac{\text{sprayed bed width in inches}}{\text{total row width in inches}} \times \frac{\text{Broadcast Rate}}{\text{Treated Acre}} = \frac{\text{Band Rate}}{\text{Field Acre}}$$

Example: A directed spray application will be made to 45" plant beds that are separated by 15" of unsprayed row-middles.

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

The calculations to determine the appropriate equivalent rate of product to use for this situation based on a label broadcast rate recommendation of 12 fl oz/acre follows:

$$\frac{\text{45" sprayed bed width}}{\text{60" total row width}} \times \frac{\text{12 fl oz Headline}}{\text{Treated Acre}} = \frac{\text{9 fl oz Headline}}{\text{Field Acre}}$$

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Table A. Headline® fungicide Crop-Specific Restrictions and Limitations

Crop[1]	Minimum Time from Application to Harvest (PHI) (days)	Maximum Product Rate per Acre per Application (fl oz)	Maximum Number of Sequential Applications	Maximum Number of Applications per Season	Maximum Product Rate per Acre per Season (fl oz)
Barley	Apply no later than 50% head emergence (Feekes 10.3, Zadok's 55)	9	2	2	18
Citrus Fruit Crop Group:[1] Orange, Grapefruit, Lemon, Lime, Tangerine, and Tangelo	0	15	2	4	54[2]
Corn (all types)	7	12	2	6	72
Dried Shelled Peas & Beans[1] *(except soybean)*	21	9	2	2	18
Edible - Podded Legume Vegetables[1]	7	9	2	2	18
Grass grown for Seed	14	12	2	2	24
Mint	14	12	2	4	48
Peanut	14	15	2	3	45
Pecan	14	7	2	4	28
Rye	Apply no later than 50% head emergence (Feekes 10.3, Zadok's 55)	9	2	2	18
Soybean	21	12	2	2	24

[1] For a complete list of crops within a crop group, see **Section VI. Crop-Specific Recommendations**.

[2] For specific information on maximum use rates and maximum rates per season, see **Section VI. Crop-Specific Recommendations, Citrus Fruit.**

Aerial application is permitted for all labeled crops. **No aerial application in New York State except as permitted under FIFRA Section 24(c), Special Local Needs Registration.**

Table A. Headline® fungicide Crop-Specific Restrictions and Limitations *(continued)*

Crop[1]	Minimum Time from Application to Harvest (PHI) (days)	Maximum Product Rate per Acre per Application (fl oz)	Maximum Number of Sequential Applications	Maximum Number of Applications per Season	Maximum Product Rate per Acre per Season (fl oz)
Succulent Shelled Peas and Beans[1]	7	9	2	2	18
Sugar beet (roots and tops)	7	12	2	4	48
Sunflower	21	12	2	2	24
Tuberous and Corm Vegetables Subgroup[1]: Potato Sweet potato, Yam	3	12	1	6	72
Wheat and Triticale	Apply no later than the beginning of flowering (Feekes 10.5, Zadok's 59)	9	2	2	18

[1] For a complete list of crops within a crop group, see **Section VI. Crop-Specific Recommendations.**

Aerial application is permitted for all labeled crops. **No aerial application in New York State except as permitted under FIFRA Section 24(c), Special Local Needs Registration.**

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VI. Headline® fungicide Crop-Specific Recommendations					
Crop	**Target Disease**	**Product Use Rate per Application**	**Maximum Number of Applications per Season**	**Maximum Product Rate per Season**	**Minimum Time from Application to Harvest (PHI)**
Barley	Black point (Kernel blight or Head mold) *(Cochliobolus sativus, Alternaria* spp.*)* Leaf rust *(Puccinia hordei, P. recondita)* Net blotch *(Pyrenophora teres)* 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)*	6 to 9 fl oz per acre	2	18 fl oz per acre	Apply no later than 50% head emergence (Feekes 10.3, Zadok's 55)

Application Directions: For optimal disease control, begin applications of **Headline** prior to disease development. To maximize yields in cereals it is important to protect the flag leaf. Apply **Headline** immediately after flag leaf emergence for optimum results.

Headline 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, growers should 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 the potential for development of resistance, **DO NOT** make more than two (2) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

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

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Disease	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
Citrus Fruit Calamondin Citrus citron Citrus hybrids Chironja Grapefruit Kumquat Lemon Lime Mandarin Orange (sour and sweet) Pummelo Satsuma Tangelo Tangerine Tangor	Greasy spot *(Mycosphaerella citri)* *Scab (Elsinoe fawcettii)*	9 to 12 fl oz per acre	4	54 fl oz per acre	0 days
	Alternaria brown spot *(Alternaria citri)* Anthracnose *(Colletotrichum acutatum, C. gloeosporioides)* Black spot *(Guignardia citricarpa)* Melanose *(Diaporthe citri)* Post bloom fruit drop *(Colletotrichum acutatum)*	12 to 15 fl oz per acre			

Application Directions: For optimal disease control, begin applications of **Headline** prior to disease development and continue on a 10- to 21-day interval.

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

Use the higher rate when disease pressure is high.

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 the potential for development of resistance, **DO NOT** make more than four (4) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

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

VI. Headline® fungicide Crop-Specific Recommendations ***(continued)***

Crop	Target Disease	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
Corn Field corn *Pop corn* Sweet corn Seed production corn	Rust, common (*Puccinia sorghi*) Rust southern (*Puccinia polyspora*) Gray leaf spot (*Cercospora sorghi*)	6 to 9 fl oz per acre	6	72 fl oz per acre	7 days
	Anthracnose (*Colletotrichum graminicola*) Northern corn leaf blight (*Exserohilum turcicum*) Northern corn leaf spot (*Cochliobolus carbonum*) Physoderma brown spot (*Physoderma maydis*) Southern corn leaf blight (*Bipolaris maydis*) Yellow leaf blight (*Phyllosticta maydis*)	9 to 12 fl oz per acre			

Application Directions: For optimal disease control, begin applications of **Headline** prior to disease development and continue on a 7- to 14-day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

Headline may be used with adjuvants. See **Section III. Additives and General Tank Mixing Information** and **Section IV. Mixing Order** for more details.

DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of **12 hours** for all crops except when performing bare-hand detasseling or hand harvesting in treated corn. REI for corn for bare-hand detasseling activities and hand harvesting in corn is **7 days**. Notify workers of the exception.

No livestock feeding restrictions.

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than six (6) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

DO NOT make more than two (2) sequential applications of **Headline** before alternating to a labeled fungicide with a different mode of action for at least one (1) application.

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Disease	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
Dried Shelled Peas and Beans (except soybeans) Broad bean Chickpea Guar Lablab bean Lentil Pigeon pea *Lupinus* spp. Grain lupin Sweet lupin White lupin *Phaseolus* spp. Field bean Kidney bean Pink bean Lima bean Navy bean Pinto bean Tepary bean *Vigna* spp. Adzuki bean Blackeyed pea Catjang Cowpea Crowder pea Moth bean Mung bean Rice bean Southern pea Urd bean *Pisum* spp. Field pea	Anthracnose *(Colletotrichum* spp.*)* Alternaria leaf and pod spot *(Alternaria* spp.*)* Asian soybean rust* *(Phakopsora pachyrhizi)* Ascochyta blight *(Phoma exigua, Ascochyta* spp.*)* Cercospora leaf spot *(Cercospora* spp.*)* Downy mildew *(Phytophthora nicotianae)* *Mycosphaerella blight (Mycosphaerella* spp.*)* Powdery mildew *(Erysiphe polygoni)* Rust *(Uromyces appendiculatus)*	6 to 9 fl oz per acre	2	18 fl oz per acre	21 days

Application Directions: For optimal disease control, begin applications of **Headline** prior to disease development and continue on a 7- to 14- day interval if conditions are conducive 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 may be used with adjuvants. See **Section III. Additives and General Tank Mixing Information** and **Section IV. Mixing Order** for more details.

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than two (2) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

* See **Section VII. Management of Asian Soybean Rust.**

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

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

Application Directions: For optimal disease control, begin applications of **Headline** prior to disease development and continue on a 7- to 14- day interval if conditions are conducive 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 may be used with adjuvants. See **Section III. Additives and General Tank Mixing Information** and **Section IV. Mixing Order** for more details.

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than two (2) applications of **Headline** or other QoI **(Group 11)** fungicides per season.

* See **Section VII. Management of Asian Soybean Rust.**

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*					
Crop	**Target Disease**	**Product Use Rate per Application**	**Maximum Number of Applications per Season**	**Maximum Product Rate per Season**	**Minimum Time from Application to Harvest (PHI)**
Grasses grown for seed	Rust *(Puccinia recondita, P. graminis)* **Suppression Only** Powdery mildew *(Erysiphe graminis)*	6 to 12 fl oz per acre	2	24 fl oz per acre	14 days

Application Directions: For optimal disease control, begin applications of **Headline** 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 the potential for development of resistance, **DO NOT** make more than two (2) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*					
Crop	**Target Disease**	**Product Use Rate per Application**	**Maximum Number of Applications per Season**	**Maximum Product Rate per Season**	**Minimum Time from Application to Harvest (PHI)**
Mint	Leaf spot (*Ramularia spp., Alternaria* spp., *Phoma* spp.) Powdery mildew (*Erysiphe* spp.) Rust (*Puccinia* spp.)	9 to 12 fl oz per acre	4	48 fl oz per acre	14 days

Application Directions: For optimal disease control, begin applications of **Headline** prior to disease development and continue on a 7- to 14-day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

Headline may be used with adjuvants. See **Section III. Additives and General Tank Mixing Information** and **Section IV. Mixing Order** for more details.

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than four (4) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

DO NOT make more than two (2) sequential applications of **Headline** before alternating to a labeled fungicide with a different mode of action for at least (1) application.

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VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Diseases	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
Peanut	Early leaf spot *(Cercospora arachidicola)* Late leaf spot *(Cercosporidium personatum)* Pepperspot *(Leptosphaerulina crassiasca)* Rust *(Puccinia arachidis)* Web blotch *(Phoma arachidicola)*	6 to 15 fl oz per acre (See details below)	3	45 fl oz per acre	14 days
	Rhizoctonia limb rot, peg rot, and pod rot *(Rhizoctonia solani)* Sclerotium rot - Southern stem rot, Southern blight, and white mold *(Sclerotium rolfsii)* **Suppression Only** Sclerotinia blight *(Sclerotinia minor)*	9 to 15 fl oz per acre			
	Cylindrocladium black rot *(Cylindrocladium crotalariae)*	12 to 15 fl oz per acre			

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

For control of Rhizoctonia and Sclerotium, begin applications of **Headline** 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 use in mixes with silicone-containing adjuvants may cause crop injury under certain conditions.

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

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than three (3) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

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

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Diseases	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application To Harvest (PHI)
Pecan	Pecan scab (*Cladosporium caryigenum*)	6 to 7 fl oz per acre	4	28 fl oz per acre	14 days

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

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than four (4) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

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

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Diseases	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
Potato	Black dot (*Colletotrichum coccodes*) Early blight (*Alternaria solani*)	6 to 9 fl oz per acre	6	72 fl oz per acre	3 days
	Late blight (*Phytophthora infestans*) Powdery mildew (*Erysiphe* spp., *Leveillula taurica*) **Suppression only** White mold (*Sclerotinia sclerotiorum*)	6 to 12 fl oz per acre			

Application Directions: Begin applications of **Headline** 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 application of **Headline** 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 weather conditions are conducive to disease development.

No livestock feeding restrictions.

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than six (6) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

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

Instructions for in-furrow use to aid in the control of soilborne Rhizoctonia in Potatoes

Use 0.4-0.8 fl oz of **Headline** per 1,000 foot of row (for applications on 32-inch or 34-inch rows, the maximum application rate is 0.73 fl oz/1,000 row feet). Refer to the chart below to determine the rate per acre. Apply at planting as an in-furrow spray by directing spray pattern to uniformly cover seed pieces and surrounding soil. The spray pattern should be a 4-8 inch band that is 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** at 0.6-0.8 fl oz per 1,000 foot of row and/or tank mix with a fungicide having a different mode of action.

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

Rate per 1,000 row feet	Rate per acre (fl oz)				
(fl oz product)	32" rows	34" rows	36" rows	38" rows	40" 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[1]	See footnote[1]	12.0	11.4	10.8

[1] For 32-inch or 34-inch rows, use a maximum of 0.73 fl oz per 1,000 row feet.

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Diseases	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application To Harvest (PHI)
Rye	Leaf rust *(Puccinia recondita)* Leaf spot *(Pyrenophora* spp.*)* Powdery mildew *(Erysiphe graminis)* Septoria leaf and glume blotch *(Septoria* spp., *Stagonospora* spp.*)* Stem rust *(Puccinia graminis)* Stripe rust *(Puccinia striiformis)*	6 to 9 fl oz per acre	2	18 fl oz per acre	Apply no later than 50% head emergence (Feekes 10.3, Zadok's 55)

Application Directions: For optimal disease control, begin applications of **Headline** *prior to disease development.* To maximize yields in cereals it is important to protect the flag leaf. Apply **Headline** immediately after flag leaf emergence for optimum results. **Headline** 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, growers should 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 the potential for development of resistance, **DO NOT** make more than two (2) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Diseases	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application To Harvest (PHI)
Soybean (*Glycine max*)	Alternaria leaf spot (*Alternaria* spp.) Anthracnose (*Colletotrichum truncatum*) Asian soybean rust* (*Phakopsora pachyrhizi*) Brown spot (*Septoria glycines*) Cercospora blight (*Cercospora kikuchii*) Frogeye leaf spot (*Cercospora sojina*) Pod & Stem blight (*Diaporthe phaseolorum*) Rhizoctonia aerial blight (*Rhizoctonia solani*) Soybean rust (*Phakopsora pachyrhizi*)	6 to 12 fl oz per acre	2	24 fl oz per acre	21 days
	Suppression only Southern blight (*Sclerotium rolfsii*)	12 fl oz per acre			

Application Directions: For optimal disease control, begin applications of **Headline** prior to disease development and continue on a 7- to 14-day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

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

Headline may be used with adjuvants. See **Section III. Additives and General Tank Mixing Information** and **Section IV. Mixing Order** for more details.

Soybean forage may be fed no sooner than 14 days after last application. Soybean hay may be fed no sooner than 21 days after last treatment.

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than two (2) applications of **Headline** or other (**Group 11**) fungicides per season.

* See **Section VII. Management of Asian Soybean Rust.**

VI. Headline® fungicide Crop-Specific Recommendations ***(continued)***

Crop	Target Diseases	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application To Harvest (PHI)
Succulent Shelled Peas and Beans Pigeon pea *Vigna* spp. Blackeyed pea Cowpea Southern pea *Pisum* spp. English pea Garden pea Green pea Broad bean *Phaseolus* spp. Lima bean, green	Anthracnose *(Colletotrichum* spp.*)* Alternaria leaf and pod spot *(Alternaria* spp.*)* Asian soybean rust* *(Phakopsora pachyrhizi)* Ascochyta blight *(Phoma exigua, Ascochyta* spp.*)* Cercospora leaf spot *(Cercospora* spp.*)* Downy mildew *(Phytophthora nicotianae)* Mycosphaerella blight *(Mycosphaerella* spp.*)* Powdery mildew *(Erysiphe Polygoni)* Rust *(Uromyces appendiculatus)*	*6 to 9 fl oz* per acre	*2*	*18 fl oz* per acre	*7 days*

Application Directions: For optimal disease control, begin applications of **Headline** prior to disease development and continue on a 7- to 14-day interval if conditions are conducive 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 may be used with adjuvants. See **Section III. Additives and General Tank Mixing Information** and **Section IV. Mixing Order** for more details.

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than two (2) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

* See **Section VII. Management of Asian Soybean Rust.**

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Disease	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
Sugar beet (roots and tops)	Cercospora leaf spot *(Cercospora beticola)* *Powdery mildew (Erysiphe betae)*	9 to 12 fl oz per acre	4	48 fl oz per acre	7 days

Application Directions: Begin applications prior to disease development. Apply **Headline** at 14-day intervals. Use the higher rate when disease pressure is high.

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

Headline may be combined with low rates of COC, MSO and NIS adjuvants. **DO NOT** use silicone-containing adjuvants. Some combinations and rates may result in temporary crop injury.

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

See **Section III. Additives and General Tank Mixing Information** and **Section IV. Mixing Order** for more details.

No livestock feeding restrictions.

Resistance Management: To limit the potential for development of resistance, do not make more than four (4) applications of **Headline** or other QoI (**Group 11**) fungicides per season. **DO NOT** make more than two (2) sequential applications of **Headline** before alternating to a labeled fungicide with a different mode of action.

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Disease	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
Sunflower	Alternaria leaf spot *(Alternaria* spp.*)* Cercospora leaf spot *(Cercospora helianthi)* Downy mildew *(Plasmopara halstedii)* Powdery mildew *(Erysiphe cichoracearum)* Rust *(Puccinia helianthi, Uromyces* spp.*)* Septoria leaf spot *(Septoria* spp.*)* White rust *(Albugo tragopogonis)*	6 to 12 fl oz per acre	2	24 fl oz per acre	21 days

Application Directions: For optimal disease control, begin applications of **Headline** prior to disease development and continue on a 7- to 14-day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

Headline may be used with adjuvants. See **Section III. Additives and General Tank Mixing Information** and **Section IV. Mixing Order** for more details.

No livestock feeding restrictions.

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than two (2) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Diseases	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
Tuberous and Corm Vegetables Subgroup: Arracacha Arrowroot Chinese artichoke Jersusalem artichoke Edible canna Cassava (bitter and sweet) Chayote (root) Chufa Dasheen Ginger Leren Sweet potato Tanier Turmeric Yam bean True yam	Downy mildew *(Plasmopara spp.)* Leaf spot *(Cercospora spp., Alternaria spp.)* Powdery mildew *(Erysiphae spp., Leveillula taurica)* Rust *(Uromyces spp. Puccinia spp.)*	6 - 12 fl oz per acre	6	72 fl oz per acre	3 days
Potato	Black dot *(Colletotrichum coccodes)* Early blight *(Alternaria solani)*	6 to 9 fl oz per acre			
	Late blight *(Phytophthora infestans)* Powdery mildew *(Erysiphe spp., Leveillula taurica)* ***Suppression only*** White mold *(Sclerotinia sclerotiorum)*	6 to 12 fl oz per acre			

Application Directions: Begin applications of **Headline** 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 application of **Headline** 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 conducive to disease development.

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

No livestock feeding restrictions.

Resistance Management: To limit the potential for development of resistance, **DO NOT** make more than six (6) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

Instructions for in-furrow use to aid in the control of soilborne Rhizoctonia in Potatoes

Use 0.4-0.8 fl oz of **Headline® fungicide** per 1,000 foot of row (for applications on 32-inch or 34-inch rows, the maximum application rate is 0.73 fl oz/1,000 row feet). Refer to the chart below to determine the rate per acre. Apply at planting as an in-furrow spray by directing spray pattern to uniformly cover seed pieces and surrounding soil. The spray pattern should be a 4-8 inch band that is 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** at 0.6-0.8 fl oz per 1,000 foot of row and/or tank mix with a fungicide having a different mode of action.

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

Rate per 1,000 row feet	**Rate per acre (fl oz)**				
(fl oz product)	32" rows	34" rows	36" rows	38" rows	40" 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[1]	See footnote[1]	12.0	11.4	10.8

[1] For 32-inch or 34-inch rows, use a maximum of 0.73 fl oz per 1,000 row feet.

VI. Headline® fungicide Crop-Specific Recommendations *(continued)*

Crop	Target Diseases	Product Use Rate per Application	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
Wheat and Triticale	Black point (Kernel smudge) (*Alternaria* spp., *Helminthosporium* spp.) Leaf rust *(Puccinia triticina)* 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 trichostoma = P. tritici-repentis)*	6 to 9 fl oz per acre	2	18 fl oz per acre	Apply no later than the beginning of flowering (Feekes 10.5, Zadok's 59)

Application Directions: For optimal disease control, begin applications of **Headline** prior to disease development. To maximize yields in cereals it is important to protect the flag leaf. Apply **Headline** immediately after flag leaf emergence for optimum results.

Headline 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, growers should 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 the potential for development of resistance, **DO NOT** make more than two (2) applications of **Headline** or other QoI (**Group 11**) fungicides per season.

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

Section VII. Management of Asian Soybean Rust

If Asian soybean rust spores are present in the area, beans or peas may be infected, even if symptoms are not present. Once Asian soybean rust is established (infection level* greater than 3 - 5%) on the bean or pea plant, control is difficult to achieve with a curative approach. Optimum disease control is achieved by utilizing the combination of a preventative fungicide like **Headline® fungicide** plus an EPA approved fungicide (non-QoI mode of action) with known curative activity** against Asian soybean rust.

A comprehensive monitoring and scouting program must be continued after initial fungicide applications. Fungicide treatments that include **Headline** will protect beans or peas against Asian soybean rust for up to 21 days, but subsequent disease infection of treated leaves can occur earlier if conditions are favorable for disease development. New leaves emerging after treatment will not be protected from new infection pressure.

Monitoring for Asian Soybean Rust Presence
Information on the geographic distribution of Asian soybean rust can be gathered from multiple sources including local retailers, University Extension, USDA, the Internet and BASF. These sources must be evaluated frequently during the growing season to determine the risk and local presence of rust spores in your geography. Rust spores can move hundreds of miles in only a few days based on wind direction and speed. If Asian soybean rust is present in the area or if conditions exist where spore movement from infected areas is expected or predicted, bean or pea fields should be treated utilizing the **Headline** program described in **Table 1**.

Field Scouting
Scout bean or pea fields for presence of Asian soybean rust frequently. Asian soybean rust establishment is favored by high humidity, free moisture present on leaves and moderate air temperatures. Asian soybean rust, in most cases, becomes especially aggressive and visible when plants reach the reproductive stage of growth (flowering). Check higher risk areas of bean or pea fields for signs of disease first. These include: earlier planted or maturing beans or peas; high moisture areas near lakes, rivers or other water sources that keep humidity high; areas in the field that remain shaded longer resulting in higher free leaf moisture; low areas of fields where humidity (dew) can settle and persist longer. Look for any signs of symptoms of soybean rust presence. If Asian soybean rust is present in your field, immediately implement **Headline** program described in **Table 1**.

Scouting tip: Collect leaves from suspected plants, place suspect leaves in a clear plastic bag, inflate bag with breath (adds humidity to bag) and seal, place in warm (75° - 90° F) environment and incubate in humid plastic bags for 24 hours. Leaves in the bags should display accelerated disease development and show spore pustule development within 24 hours. Spore development should occur approximately two times faster than under normal field conditions.

Headline - Recommendations for Management of Asian Soybean Rust

Preventative + Curative Treatment

Existing Infections and/or if Asian Soybean Rust Spores Are Present or Predicted to be in the Area.

A tank mixture with an EPA approved fungicide (non-QoI mode of action) with known curative activity** against Asian soybean rust is required for control of existing Asian soybean rust infections, even if symptoms are not present. If symptoms or Asian soybean rust lesions and/or pustules are present on bean or pea plants, some yield loss may have already occurred.

The **Headline** program described in **Table 1** below must be used for Asian soybean rust if one or more of the following conditions exists:
1) Asian soybean rust is present in the bean or pea field based on field scouting;
2) Asian soybean rust is present in the local area;
3) Predictive models based on weather/wind have predicted that spores have reached or will soon reach your area; or
4) USDA and/or University Extension report that Asian soybean rust (including spores) has been identified in your geographical area.

Fungicide treatments that include **Headline** plus an EPA approved fungicide (non-QoI mode of action) with known curative activity** against Asian soybean rust will protect beans or peas for up to 21 days, but subsequent infection of treated leaves can occur earlier if conditions are favorable for disease development. New leaves emerging after treatment will not be protected from new infection pressure.

Since a second fungicide application may be required, a comprehensive monitoring and scouting program must be continued after the initial fungicide application. Base the need for second application on bean or pea growth stage, yield potential and conditions favorable for continued Asian soybean rust infection.

*Additional fungicide applications may be needed if Asian soybean rust pressure is extremely high and conditions are favorable for disease development later in the growing season. Continue the monitoring and scouting program and apply an EPA approved fungicide (non-QoI mode of action) with known curative activity** if a third application is needed.*

* Infection level = number of leaves with symptoms/signs of Asian soybean rust per 100 leaves.

** Contact your local state or federal agricultural authorities or local retailer for a list of fungicides approved in your state with known curative properties against Asian soybean rust.

Table 1 - Headline® fungicide application instructions when Asian soybean rust has been identified in the bean or pea field to be treated, is present in the local geographical area or spores have been predicted to be in the local geographical area.

Application 1	Treatment	**Headline** (6 - 9 fl oz/acre)[1] + adjuvant + EPA approved fungicide (non-QoI mode of action) with known curative activity against Asian soybean rust[2]
	Timing	This application must be made soon after first rust infection, preventatively, or at blooming start (Growth Stage R1 - R3), even if symptoms have not appeared. Refer to section entitled **Headline - Recommendations for Management of Asian Soybean Rust** and repeat application as necessary, depending on disease evolution.
Application 2[3]	Treatment	**Headline** (6 - 9 fl oz/acre)[1] + adjuvant + EPA approved fungicide (non-QoI mode of action) with known curative activity against Asian soybean rust[2]
	Timing	21 days after Application 1 or *Earlier (no sooner than 7 days) if monitoring shows active* disease

[1] Higher labeled rates of **Headline** provide longer residual control of Asian soybean rust.

[2] Contact your local, state, or federal agricultural authorities or local retailer for a list of approved fungicides in your state approved for this purpose.

[3] Continue to carefully monitor and scout bean or pea fields as described in the section entitled **Section VII. Management of Asian Soybean Rust**. Base need for second application on results of monitoring and scouting for disease, crop growth stage and yield potential. Consult with your local Retailer or University extension representative for guidance, as needed. *Additional fungicide applications may be needed if Asian soybean rust pressure is extremely high and conditions are favorable for disease development later in the growing season. Continue the monitoring and scouting program and apply an EPA approved fungicide (non-QoI mode of action) with known curative activity if the third application is needed.*

Preventative Treatment

Asian Soybean Rust (including spores) Not Present or Predicted to be Present in the Field or Area

The preventative **Headline® fungicide** program described in **Table 2** below should only be used if none of the conditions described in one through four of the section immediately above exist. Growers must continue to monitor and scout bean and pea fields as described in sections entitled **Monitoring for Asian Soybean Rust Presence** and **Field Scouting**.

A second fungicide application may be needed if Asian soybean rust (including spores) is detected or identified in the treated field or geographical area. Continue a comprehensive monitoring and scouting program after the initial application of **Headline**. Infection of treated bean and pea leaves can occur and new leaves emerging after treatment will not be protected from Asian soybean rust. The need for a second application should be based on bean and pea growth stage, yield potential and environmental conditions. *If a second application is necessary, apply* **Headline** plus an effective EPA approved fungicide (non-Qol mode of action) with known curative activity** against Asian soybean rust.

*Additional fungicide applications may be needed if Asian soybean rust pressure is extremely high and conditions are favorable for disease development later in the growing season. Continue the monitoring and scouting program and apply an EPA approved fungicide (non-Qol mode of action) with known curative activity ** if a third application is needed.*

**Contact your local, state, or federal agricultural authorities or local retailer for a list of fungicides approved in your state with known curative properties against Asian soybean rust.

Need for Season Long Monitoring, Regardless of Headline Program Selected

The key to adequate season long control of Asian soybean rust is careful monitoring and scouting of bean and pea fields all season, especially from initiation of flowering through pod fill. After the first application, maintain a thorough monitoring and scouting program. Apply follow-up fungicide treatments as needed, based on crop stage of growth, yield potential and as the residual protection of the first application begins to wane.

Thorough spray coverage of bean and pea plants is essential for optimum control. Utilize spray application techniques including sufficient water carrier per acre, pressure and proper nozzle selection that ensure thorough coverage. See the **Headline** main label and your local retailer for recommendations.

Table 2 - Headline® fungicide application instructions when Asian soybean rust has not been identified in the bean or pea field to be treated, is not present in the local geographical area and spores are not present or predicted to be present in the local geographical area.

Application 1	Treatment	**Headline** (6 - 9 fl oz/acre)[1] + adjuvant
	Timing	R1-R3 leaf stage (1st flower to beginning pod))
Application 2[3]	Treatment	**Headline** (6 - 9 fl oz/acre)[1] + adjuvant + EPA approved fungicide (non-QoI mode of action) with known curative activity against Asian soybean rust[2]
	Timing	21 days after Application 1 or Earlier (no sooner than 7 days) if monitoring shows active disease

[1] Higher labeled rates of **Headline** provide longer residual control of Asian soybean rust.
[2] Contact your local, state, or federal agricultural authorities or local retailer for a list of approved fungicides in your state approved for this purpose.
[3] Continue to carefully monitor and scout bean or pea fields as described in the section entitled **Management of Asian Soybean Rust**. If Asian soybean rust, including spores, is detected in your fields or local geography, the treatment described in Application 2 may be needed. Base the need for this treatment on crop stage of growth, environmental conditions and yield potential. Consult your local Retailer or University extension representative for guidance, as needed. Refer to section entitled **Application Information** above. *Additional fungicide applications may be needed if Asian soybean rust pressure is extremely high and conditions are favorable for disease development later in the growing season. Continue the monitoring and scouting program and apply an EPA approved fungicide (non-QoI mode of action) with known curative activity if the third application is needed.*

Recommendations for ground applications:

For best Asian soybean rust control, spray coverage should contact all soybean foliage, including both upper and lower areas of the soybean canopy. Recommendations for best spray coverage include:
1) Select spray nozzles that maximize medium to fine droplets;
2) Increase spray volume per acre to a minimum of 15 gpa;
3) Increase spray pressure (within nozzle specifications) to maximize penetration of spray into the soybean canopy.

Conditions of Sale and Warranty

The **Directions For Use** of this product reflects the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with 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 CORPORATION ("BASF") or the Seller. 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.

BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT PERMITTED BY LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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July 13, 2006

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202-4501

Subject: Headline® Fungicide
EPA Registration No. 7969-186

Dear Sir/Madam:

On April 28, 2006, EPA approved amended labeling for Headline® Fungicide, EPA Registration No. 7969-186 (copy attached). The purpose of this notification is to re-insert resistance management text and a livestock feeding statement, pertaining to the use in sunflower, that was approved by EPA on the previous label version and happened to be inadvertently omitted when BASF updated the label and submitted it to the Agency for approval of some additional uses. Enclosed are one copy of amended labeling, with the re-inserted statements highlighted on page 24, and a completed EPA 8570-1 Registration Application form. A copy of the prior EPA-stamped label, dated September 15, 2005, containing the approved language (page 24), is also attached for reference.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under section 12 and 14 of FIFRA.

Thank you for your attention to this matter. If you have any questions or need further information, please contact me directly at (919) 547-2983, or by e-mail at sansonc@basf.com.

NOTIFICATION

JUL 3 1 2006

Regards,
BASF Corporation
Agricultural Products Division

Charlotte A Sanson

Charlotte A. Sanson
Product Registration Manager

cc: Tony Kish, EPA PM 22

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