

GROUP	7	11	FUNGICIDE
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HEADLINE® DUO
Fungicide
Wettable granules

Contains **HEADLINE® DUO ONE** and **HEADLINE® DUO TWO** Fungicide for use in chickpeas, dry peas and lentils

COMMERCIAL (AGRICULTURAL)

HEADLINE® DUO ONE

HEADLINE® DUO TWO

GUARANTEE:

Boscalid 25.2%
 Pyraclostrobin 12.8%

GUARANTEE:

Boscalid 70%

Warning, contains the allergen sulfites

REG. NO. 28862 PCP ACT

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CAUTION POISON
POTENTIAL SKIN SENSITIZER
WARNING - EYE IRRITANT

NET CONTENTS: 6.4 kg

NET CONTENTS: 1.16 kg

READ THE LABEL AND BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN

IN CASE OF EMERGENCY ENDANGERING LIFE OR PROPERTY INVOLVING THIS
PRODUCT, CALL DAY OR NIGHT 1-800-454-2673

BASF Canada Inc.
 100 Milverton Drive, 5th Floor, Mississauga, Ontario L5R 4H1
 1-877-371-2273

HEADLINE® is a registered trademark of BASF.

GENERAL INFORMATION

This package contains **HEADLINE DUO**, a water dispersible granule (WG). The active ingredients in **HEADLINE DUO** belong to two classes of fungicides, the strobilurin and the anilids. **HEADLINE DUO** contains two different modes of action on most major diseases and is effective against pathogens resistant to other fungicides. **HEADLINE DUO** inhibits spore germination, mycelial growth and sporulation of the fungus on the leaf surface. Optimum disease control is achieved when **HEADLINE DUO** is applied in a regularly scheduled protective spray program and is used in a rotation with fungicides of a different mode of action.

DIRECTIONS FOR USE

Apply recommended rates of **HEADLINE DUO** as instructed in the following crop specific application rate and timing table. Apply **HEADLINE DUO** with ground or aerial equipment. Equipment should be checked frequently for proper calibration.

As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests. **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Field sprayer application

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. Boom height must be 60 cm or less above the crop or ground.

Aerial application

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Chickpeas: Application Rate and Timing Table

Crop	Disease	Application rate
Chickpeas	Ascochyta blight (<i>Ascochyta rabiei</i>) White mold (<i>Sclerotinia sclerotiorum</i>) Gray mold (<i>Botrytis cinerea</i>)	HEADLINE DUO ONE must be tank mixed at a rate of 0.79 kg/ha with HEADLINE DUO TWO at 0.143 kg/ha

Apply **HEADLINE DUO ONE and HEADLINE DUO TWO** as specified above at the beginning of flowering OR at the onset of symptoms for the more aggressive diseases (e.g. ascochyta blight in chickpeas).

Ascochyta blight in chickpeas develops quickly once established so early detection is essential to the success of any fungicide program.

DO NOT apply more than 2 applications of this tank mixture combination per year with a minimum re-treatment interval of 10-14 days.

Pre-harvest interval: 30 days

DO NOT apply sequential applications of this tank mixture combination. Alternate to a fungicide with a mode of action other than Group 7 and 11 for at least one application. If disease conditions persist or weather conditions are favourable for disease development, apply another application of **HEADLINE DUO ONE** tank mixed with **HEADLINE DUO TWO**.

All information required to use this product is contained in this pamphlet.

Dry Peas: Application Rate and Timing Table

Crop	Disease	Application rate
Dry peas	Ascochyta blight (<i>Ascochyta spp.</i>) Gray mold (<i>Botrytis cinerea</i>) Mycosphaerella blight (<i>Mycosphaerella spp.</i>) Powdery mildew (<i>Erysiphe spp.</i>)	HEADLINE DUO ONE must be tank mixed at a rate of 0.79 kg/ha with HEADLINE DUO TWO at 0.143 kg/ha

Apply **HEADLINE DUO ONE and HEADLINE DUO TWO** as specified above at the beginning of flowering OR at the onset of symptoms for the more aggressive diseases.

DO NOT apply more than 2 applications of this tank mixture combination per year with a minimum re-treatment interval of 10-14 days.

Pre-harvest interval: 30 days

DO NOT apply sequential applications of this tank mixture combination. Alternate to a fungicide with a mode of action other than Group 7 and 11 for at least one application. If disease conditions persist or weather conditions are favourable for disease development, apply another application of **HEADLINE DUO ONE** tank mixed with **HEADLINE DUO TWO**.

All information required to use this product is contained in this pamphlet.

Lentils: Application Rate and Timing Table

Crop	Disease	Application rate
Lentils	Ascochyta blight (<i>Ascochyta spp.</i>) White mold (<i>Sclerotinia sclerotiorum</i>) Gray mold (<i>Botrytis cinerea</i>) Anthracnose (<i>Colletotrichum spp.</i>)	HEADLINE DUO ONE must be tank mixed at a rate of 0.79 kg/ha with HEADLINE DUO TWO at 0.143 kg/ha
<p>Apply HEADLINE DUO ONE and HEADLINE DUO TWO as specified above at the beginning of flowering OR at the onset of symptoms for the more aggressive diseases.</p> <p>DO NOT apply more than 2 applications of this tank mixture combination per year with a minimum re-treatment interval of 10-14 days.</p> <p>Pre-harvest interval: 30 days</p> <p>DO NOT apply sequential applications of this tank mixture combination. Alternate to a fungicide with a mode of action other than Group 7 and 11 for at least one application. If disease conditions persist or weather conditions are favourable for disease development, apply another application of HEADLINE DUO ONE tank mixed with HEADLINE DUO TWO.</p> <p>All information required to use this product is contained in this pamphlet.</p>		

MIXING

1. Ensure the spray tank is clean before use. Follow the clean-out recommendations stated on the label of the product that was previously used.
2. Fill the spray tank one-half full of water and start agitation.
3. Add the required amount of **HEADLINE DUO** to the tank.
4. Continue agitation while filling the remainder of the spray tank .
5. After use, clean the spray tank.

APPLICATION METHODS

Ground Application

Apply **HEADLINE DUO** at rates listed in application rate and timing table when conditions are favourable for the development of disease. Use a minimum water volume of 100 L/ha on chickpeas, dry peas and lentils. Ensure thorough coverage of foliage. Consult nozzle manufacturers recommendation for spray pressures for specific nozzles.

Aerial Application

Apply **HEADLINE DUO** at rates listed in application rate and timing table (crop specific) when conditions are favourable for the development of disease. Use a minimum water volume of 50 L/ha. Ensure thorough coverage of foliage. Consult nozzle manufacturers recommendation for spray pressures for specific nozzles.

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-877-371-BASF (2273) or obtain technical advice from the distributor or your provincial agricultural representative.

Additives

Do not use additives or adjuvants unless otherwise specified.

Buffer Zones

Use of the following spray methods or equipment DO NOT require a buffer zone: hand-held or backpack sprayer and spot treatment.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of application	Crops		Buffer zones (metres) required for the protection of:			
			Freshwater habitat of depths:		Estuarine/marine habitats of depths:	
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m
Field sprayer*	Chickpeas, dry peas, lentils		5	1	1	1
Aerial	Chickpeas, dry peas, lentils	Fixed wing or rotary wing	150	10	10	1

*For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labeled buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labelled buffer zone can be reduced by 30%.

ENVIRONMENTAL HAZARDS

Toxic to aquatic organisms, non-target terrestrial plants and small wild mammals. Observe buffer zones specified under DIRECTIONS FOR USE.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Boscalid present in **HEADLINE DUO** is persistent and may carry over. It is recommended that any products containing boscalid not be used in areas treated with this product during the previous season.

RESISTANCE-MANAGEMENT RECOMMENDATIONS

Please note that **HEADLINE DUO** contains both a Group 7 (boscalid) and Group 11 (pyraclostrobin) fungicide. Any fungal population may contain individuals naturally resistant to **HEADLINE DUO** and other Group 7 and Group 11 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other

resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance:

- Adhere to the label instructions regarding the use of **HEADLINE DUO** or other Group 7 or 11 fungicides as stated in the Crop-Specific Restrictions and Limitations section of the label. **DO NOT** apply more than two (2) sequential applications of **HEADLINE DUO** before alternating to at least one application of a fungicide with different mode of action other than Group 7 and Group 11.
- **HEADLINE DUO** use should be based on an IPM program that includes scouting, historical information related to pesticide use, crop rotation and considers cultural, biological and other chemical control practices.
- Monitor treated fungal populations for resistance development.
- If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different target site of action, if available.
- Contact your local extension specialist, or certified crop advisers for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information and to report suspected resistance, contact a BASF representative at 1-877-371-2273 or at www.agsolutions.ca.

RESTRICTIONS AND LIMITATIONS

1. Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours.
2. All crops can be grazed or fed to livestock.
3. A plant back restriction of 14 days is required for all crops not on the label.
4. Custom applicators must use ground boom equipment with an enclosed cab. An enclosed cab is defined as a cab having a nonporous barrier that totally surrounds the occupant and prevents contact with pesticides outside the cab.
5. **DO NOT** use in greenhouses.

STORAGE

1. Store the leftover product in original tightly closed container.
2. **DO NOT** ship or store the product near food, feed, seed and fertilizers.

3. Store in cool, dry, locked, well-ventilated area without floor drain.

DISPOSAL

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

PRECAUTIONS

1. **KEEP OUT OF REACH OF CHILDREN.**
2. Harmful if swallowed. Do not take internally.
3. Avoid contact with eyes, skin and clothing.
4. Wash thoroughly after handling and before eating, drinking or smoking.
5. Wear long sleeved shirt, long pants, chemical resistant gloves, socks and footwear during mixing/loading, application, clean-up and repair. Wear goggles or a face shield during mixing/loading.
6. If clothing becomes contaminated, remove and wash separately from household laundry before reuse.
7. Clean spray equipment thoroughly after use.
8. Do not contaminate domestic or irrigation water, lakes, streams or ponds by the cleaning of equipment or the disposal of wastes.
9. If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's web site at www.croplife.ca.

FIRST AID

If swallowed: Call a poison control centre 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 centre 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 centre 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 centre or doctor for further 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 the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION

The patient should be treated symptomatically.

NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

HEADLINE® DUO ONE
(Component of the Headline Duo Tank Mix)
Fungicide
Wettable granules

GUARANTEE:

Boscalid 25.2%
Pyraclostrobin 12.8%

REG. NO. 28862 PCP ACT**NET CONTENTS: 6.4 kg****Warning, contains the allergen sulfites****READ THE LABEL AND BOOKLET BEFORE USING**

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HEADLINE® DUO TWO
(Component of Headline Duo Tank Mix)
Fungicide
Wettable granules

GUARANTEE:

Boscalid 70%

REG. NO. 28863 PCP ACT

NET CONTENTS: 1.16 kg

Warning, contains the allergen sulfites

READ THE LABEL AND BOOKLET BEFORE USING

CAUTION **POISON**
POTENTIAL SKIN SENSITIZER
WARNING - EYE IRRITANT

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