

# Endura®

# Fungicide

For use in the following crops: alfalfa; beans, dried and succulent; *Brassica*, head and stem; *Brassica*, leafy greens; bulb vegetables; celery; celtuce; citrus fruit; cucurbit vegetables; Florence fennel; fruiting vegetables; grape; kohlrabi; leaf petiole vegetables; leafy greens; lettuce; peanut; peas, dried shelled and succulent; potato; rapeseed; root and tuber vegetables; soybean; sunflower; and swiss chard

#### **Active Ingredient:**

boscalid*: 3-pyridinecarboxamide, 2-chloro-N-(4'-chloro(1,1'-biphenyl)-2-yl)	70.0%
Other Ingredients:	30.0%
Total:	100.0%

 $^{\star}$  0.7 oz [0.044 lb ai] of boscalid in 1 oz of product

EPA Reg. No. 7969-197

**EPA Est. No.** 

# 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 the label, find someone to explain it to you in detail.)

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

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

#### **Net Contents:**

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

FIRST AID					
If in eyes	<ul> <li>Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes; then continue rinsing.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>				
If on skin	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>				
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>DO NOT induce vomiting unless told to do so by a poison control center or doctor.</li> <li>DO NOT give anything by mouth to an unconscious person.</li> </ul>				
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth to mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>				
	HOTI INF NUMBER				

#### **HOTLINE NUMBER**

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

#### **Precautionary Statements**

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

WARNING. Causes substantial but temporary eye injury. Harmful if absorbed through skin. **DO NOT** get in eyes or on clothing. Wear protective eyewear (goggles, face shield or safety glasses). Harmful if swallowed. Harmful if inhaled. Avoid breathing dust. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

#### **Personal Protective Equipment (PPE)**

#### Applicators and other handlers must wear:

- Protective eyewear (goggles, face shield or safety glasses)
- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material including barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber\* ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils
- Shoes plus socks

#### **User Safety Requirements**

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

#### **Engineering Controls Statement**

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

#### **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove clothing/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**

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

#### **Groundwater Advisory**

Boscalid is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

<sup>\*</sup> Includes natural rubber blends and laminates

#### **Surface Water Advisory**

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of boscalid from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

#### **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.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions, precautions, and **Conditions of Sale and Warranty** are to be followed. This labeling must be in the user's possession during application.

#### AGRICULTURAL USE REQUIREMENTS

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

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

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

- Protective eyewear (goggles, face shield or safety glasses)
- Coveralls
- Chemical-resistant gloves (made of any waterproof material)
- Shoes plus socks

#### STORAGE AND DISPOSAL

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

#### **Pesticide Disposal**

Wastes resulting from the use of 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 representative at the nearest EPA Regional Office for guidance.

#### **Container Handling**

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

Triple rinse containers small enough to shake (capacity ≤ 50 pounds) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 50 pounds) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

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

#### In Case of Emergency

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

• CHEMTREC 1-800-424-9300

• BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

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

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

- Dike and contain 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 water.
- Wash clothing before reuse.
- Keep spill out of all sewers and open bodies of water.

#### **Product Information**

This package contains **Endura® fungicide**, a water dispersible granule (WG). Boscalid, the active ingredient in **Endura**, belongs to the group of respiration inhibitors classified by the US EPA and Canada PMRA as carboxamides, or target site of action **Group 7** fungicides. **Endura** has a new mode of action and is effective against pathogens resistant to other fungicides.

**Endura** has a protective effect because it inhibits spore germination and a curative effect because it inhibits mycelial growth and sporulation of the fungus on the leaf surface. However, optimum disease control is achieved when **Endura** is applied in a regularly scheduled protective spray program and used in a rotation program with other fungicides.

Because of its high specific activity and rainfastness, **Endura** has good residual activity against target fungi.

**Endura** is not for use in greenhouse or transplant production systems.

#### **Resistance Management**

For resistance management, please note that **Endura** contains a **Group 7** fungicide. Any fungal population may contain individuals naturally resistant to **Endura** and other **Group 7** fungicides. A gradual or total loss of pest control may occur over time if fungicides from this group are used repeatedly in the same fields. Appropriate resistancemanagement strategies must be followed. Endura is effective against pathogens resistant to fungicides with modes of action different from those of carboxamide (anilide) fungicides (target site **Group 7**), including dicarboximides, sterol inhibitors, benzimidazoles, Qol fungicides, and phenylamides. Fungal isolates resistant to **Group 7** fungicides may eventually dominate the fungal population if **Group 7** 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 of Endura or other Group 7 fungicides.

To maintain the performance of **Endura** in the field, **DO NOT** exceed the maximum number of applications of **Endura** per year and the total number of sequential applications of **Endura** stated in **Table 2. Endura® fungicide Crop-specific Restrictions and Limitations Overview** and **Table 3. Endura® fungicide Crop-specific Requirements.** Adhere to the label instructions regarding

the consecutive use of **Endura** or other target site of action **Group 7** fungicides that have a similar site of action on the same pathogens.

The following instructions may delay the development of fungicide resistance:

- 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. Use at least the minimum labeled rates of each fungicide in the tank mix.
- 2. IPM Integrate Endura into an overall disease and pest management program. Follow cultural practices known to reduce disease development. Consult your local extension specialist, certified crop advisor and/or BASF representative for additional IPM strategies established for your area. Endura may be used in Agricultural Extension advisory (disease forecasting) programs which base application timing on environmental factors favorable for disease development.
- 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.
- 4. Reporting If a Group 7 target site fungicide, including Endura, appears to be less or no longer effective against a pathogen that it previously controlled or suppressed, contact a BASF representative, local extension specialist, or certified crop advisor to assist in determining the cause of reduced performance.

#### **Cleaning Spray Equipment**

Clean spray equipment thoroughly before and after applying this product, particularly if a product with the potential to injure crops was used prior to **Endura**.

#### **Application Instructions**

Apply directed rates of **Endura** as instructed by **Table 3**. **Endura® fungicide Crop-specific Requirements**. Ground application is advised for thorough coverage. **DO NOT** apply by air to peanuts. For all other crops listed on this label, aerial application can be made, including conditions where applications are not possible using ground equipment. **Endura** can be applied through sprinkler irrigation equipment. Check equipment frequently for calibration. Under low-level disease conditions, use the minimum application rates; use maximum application rates and shortened spray schedules for severe or threatening disease conditions. **DO NOT** apply when conditions favor drift from target area.

#### **Ground Application**

Apply **Endura** in sufficient water to ensure thorough coverage of foliage, bloom, and fruit. Thorough coverage is required for optimum disease control.

#### **Directed or Banded Sprays**

The rates on the **Endura® fungicide** label reflect the amount of product uniformly applied over an acre of ground on a broadcast basis.

In some crops, apply **Endura** as a directed or banded spray over the rows or plant beds, with the alleys or row middles left unsprayed. For such uses, reduce the labeled **Endura** rates 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 directions.

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

sprayed bed width	+	unsprayed row middles width	=	total row width
sprayed bed width in inches	X	broadcast rate		band rate
total row width in inches	^	treated acre	=	field acre

**EXAMPLE:** Directed spray application to 45-inch plant beds that are separated by 15-inches of unsprayed row middles.

The calculation to determine the appropriate equivalent rate of product to use for this situation based on a label broadcast rate of 6 ozs/A follows:

45 inches sprayed		6 ozs		4.5 ozs
bed width	~	Endura		Endura
60 inches total	^	treated acre	=	field acre
row width				

#### **Aerial Application**

**DO NOT** apply by air to peanuts. For all other crops listed on this label, aerial application can be made and thorough coverage is required to obtain optimum disease control. Avoid applications under conditions when uniform coverage cannot be obtained or when spray drift may occur. Use no less than 5 gallons of spray solution per acre. For aerial application to citrus fruit and grape use no less than 10 gallons of spray solution per acre. For all crops, thorough coverage is required for optimum disease control.

## Directions For Use Through Sprinkler Irrigation Systems

#### **Sprayer Preparation**

Thoroughly clean chemical tank and injector system. Flush system with clean water.

#### **Application Instructions**

Apply **Endura** at rates and timings as described in this label.

#### **Use Precautions for Sprinkler Irrigation Applications**

- This product can be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, side [wheel] roll, traveler, big gun, solid set, or hand move irrigation systems. **DO NOT** apply this product through any other type of irrigation system.
- Add this product to the pesticide supply tank containing sufficient water to maintain a continuous flow by the injection equipment. In continuous moving systems, inject this product-water mixture continuously, applying the labeled rate per acre for that crop. DO NOT exceed 1/2 inch (13,577 gallons) per acre. In stationary or noncontinuous moving systems, inject the product-water mixture in the last 15 to 30 minutes of each set allowing sufficient time for all of the required pesticide to be applied by all the sprinkler heads and applying the labeled rate per acre for that crop. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non uniform distribution of treated water. Thorough coverage of foliage is required for good control. Maintain good agitation during the entire application.
- If you have questions about calibration, contact State Extension Service specialist, 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, including 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 the supervision of the responsible person, shall shut the system down and make necessary adjustments when appropriate.
- 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

- 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 (RPZ) back-flow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system 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, including 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.
- DO NOT apply when wind speed favors drift beyond the area intended for treatment.

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

**Endura®** fungicide can be tank mixed with most fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives. See **Table 3. Endura®** fungicide **Crop-specific Requirements** for exceptions.

Under some conditions, the use of additives or adjuvants may improve the performance of **Endura**. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can also influence crop response and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, or crop injury may result from mixing **Endura** 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.

When an adjuvant is used with this product, BASF recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

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

#### **Compatibility Test and Mixing Order**

If tank mixtures are used, it is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

# Compatibility Test for Tank Mix Components

Add components in the following sequence, using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.

- Water For 100 gallons per acre spray volume, use 16 cups (1 gallon) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended ed source at the source temperature.
- Water-dispersible products (dry flowables, wettable powders, suspension concentrates, or suspoemulsions). Cap the jar and invert 10 cycles.
- 3. **Water-soluble products** Cap the jar and invert 10 cycles.
- Emulsifiable concentrates (oil concentrate or methylated seed oil when applicable). Cap the jar and invert 10 cycles.
- 5. **Water-soluble additives** Cap the jar and invert 10 cycles.
- 6. Let the solution stand for 15 minutes.
- 7. **Evaluate** the solution for uniformity and stability. The spray solution must not have free oil on the surface, fine

particles that precipitate to the bottom, or thick (clabbered) texture. **DO NOT** use any spray solution that could clog spray nozzles.

#### Mixing Order

- 1. **Water** Begin by filling a thoroughly clean sprayer tank 3/4 full of clean water.
- 2. **Agitation** Maintain constant agitation throughout mixing and application.
- 3. **Inductor** If an inductor is used, rinse it thoroughly after each component has been added.
- 4. Products in PVA bags Place any product contained in water-soluble PVA bags into the mixing tank. Wait until water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- Water-dispersible products (including Endura® fungicide, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
- 6. Water-soluble products
- 7. **Emulsifiable concentrates** (including oil concentrates when applicable)
- 8. **Water-soluble additives** (including ammonium sulfate [AMS] or urea ammonium nitrate [UAN] when applicable)
- Remaining quantity water Make sure that each component is thoroughly mixed and suspended before adding tank mix partners. Make constant agitation during application.

#### **Restrictions and Limitations**

- DO NOT exceed the maximum product rate (ozs/A) per year, the maximum rate per application, or the total number of applications of Endura per year as stated in Table 2. Endura® fungicide Crop-specific Restrictions and Limitations Overview and Table 3. Endura® fungicide Crop-specific Requirements. Preharvest interval (PHI) restrictions are also included in these tables.
- Livestock Feeding Restrictions DO NOT feed peanut hay or treated pea commodities to livestock.
- DO NOT apply more than the maximum annual use rate of ai/A or ozs of product/A for each specific crop from any combination of products containing boscalid (e.g. Pristine® fungicide, Endura). See Table 1. Endura Rate Conversions for corresponding pounds boscalid per acre.
- DO NOT apply by air to peanuts.
- Plantback Restrictions Crops with registered uses may be replanted at any time. All other crops grown for food or feed may be planted after 14 days.
- DO NOT use on sugar beet.
- **Endura** is not for use in greenhouse or transplant production systems.

Table 1. Endura Rate Conversions\*

Product Use Rate (oz/A)	lb ai boscalid
2.5	0.110
3.5	0.154
4.5	0.198
5	0.220
5.3	0.233
5.5	0.242
6	0.264
6.5	0.286
6.8	0.299
7	0.308
7.8	0.343
8	0.352
9	0.396
10	0.440
11	0.484
12.5	0.550

<sup>\*</sup> Corresponding pounds boscalid per acre for Product Use Rates (oz/A) in **Table 3. Endura® fungicide Cropspecific Requirements** 

#### **Restrictions and Limitations - Alfalfa**

- DO NOT use harvested seed for sprouting.
- Processed seed must be labeled "Not for human or animal consumption" at the processing plant. All alfalfa seed screenings must be disposed of in such a way that they cannot be distributed or used for food or feed.
- No portion of treated plant used for seed production may be grazed, used, or distributed for food or feed purposes.
- Livestock grazing or feeding is permitted on alfalfa for forage and hay only.

Table 2. Endura® fungicide Crop-specific Restrictions and Limitations Overview\*

Crop/Crop Group**	Minimum Time from Application to Harvest (PHI) (days)	Maximum Rate per Acre per Application (ozs product)	Maximum Number of Applications per Year***	Maximum Rate per Acre per Year (ozs product)
Alfalfa for forage and hay	14	6.5	3	19.5
Alfalfa grown for seed	14	11	2	22
Beans, dried and succulent	21 (dried) 7 (succulent)	11	2	22
Brassica, head and stem	0	9	2	18
Brassica, leafy greens (except watercress)	14	9	2	18
Bulb vegetable	7	6.8	6	41
Celery	0	9	2	18
Celtuce	0	9	2	18
Citrus fruit [group 10-10]	0	6.8	4	27.2
Cucurbit vegetable [group 9]	0	6.5	4	26
Florence fennel	0	9	2	18
Fruiting vegetable [group 8-10]	0	3.5	6	21
Tomato***	U	12.5	2	25
Grape***	14	4.5	5	24
Kohlrabi	0	9	3 2	18
Leaf petiole vegetables [subgroup 22B]	0	9	2	18
Leafy greens	14	9	2	18
Lettuce (head and leaf)	14	11	2	22
Peanut	14	10	3	30
Peas, dried shelled	21	11	2	22
Peas, succulent	7	11	2	22
Potato***	10	4.5	4	20
Rapeseed	21	10 6	2	12
Root and tuber vegetables:		4.5	5	
root vegetables (except sugar beet) [subgroup 1B]***	0	7.8	3	23.4
Root and tuber vegetables: tuberous and corm vegetables	10	4.5	4	20
[subgroup 1C]***	10	10	2	- 20
Soybean	21	11	2	22
Sunflower	21	9	2	18
Swiss chard	0	9	2	18

<sup>\*</sup> See **Table 3. Endura® fungicide Crop-specific Requirements** for complete directions and exceptions, including restrictions regarding aerial and sprinkler irrigation application.

<sup>\*\*</sup> For a complete list of crops within a crop group, see Table 3. Endura® fungicide Crop-specific Requirements.

<sup>\*\*\*</sup> Maximum rate per acre, number of applications per year, and maximum rate per acre per year vary for tomato; grape; potato; and root and tuber vegetables depending on the target disease. Refer to **Crop-specific Use Directions** for fruiting vegetables; grape; potato; and root and tuber vegetables for maximum rates and number of applications by target disease.

<sup>\*\*\*\*</sup> At the maximum use rate only, except for tomato, grape, potato, and root and tuber vegetables.

#### **Crop-specific Use Directions**

Table 3. Endura® fungicide Crop-specific Requirements

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Alfalfa for forage and hay**	Common leaf spot (Pseudopeziza medicaginis)  Leaf spot (Leptosphaerulina briosiani)  Spring black stem and leaf spot (Phoma medicaginis)  Suppression Only:  Powdery mildew (Erysiphe pisi)	6.5	2 per cutting and 3 total per year	19.5	14
	Southern blight (Sclerotium rolfsii) White mold (Sclerotinia sclerotiorum, S. trifoliorum)				
Alfalfa grown for seed**	Common leaf spot (Pseudopeziza medicaginis)  Leaf spot (Leptosphaerulina briosiani)  Spring black stem and leaf spot (Phoma medicaginis)  Suppression Only: Powdery mildew (Erysiphe pisi)  Southern blight (Sclerotium rolfsii)	6 to 11	2*	22	14
	White mold (Sclerotinia sclerotiorum, S. trifoliorum)	8 to 11			

(continued)

#### Table 3. Endura® fungicide Crop-specific Requirements (continued)

#### Alfalfa (continued)

**Application Directions.** Begin **Endura** applications when conditions favorable for disease are expected, but prior to onset of disease development. For stand establishment of fall seeded alfalfa, begin applications in fall through early winter prior to first snowfall or extended cool, wet conditions. For seed pod protection, begin applications at 10% to 30% bloom.

Disease control can be improved when application equipment and spray volumes are adjusted to achieve thorough canopy penetration and coverage.

**Alfalfa for forage and hay.** Repeat application on a 14-day to 21-day interval if conditions are conducive for disease development. Use the shorter interval when disease pressure is high. **DO NOT** apply more than 19.5 ozs/A (0.858 lb boscalid) per year.

No restriction for livestock grazing or feeding on alfalfa for forage and hay.

**Alfalfa grown for seed.** Repeat application on a 7-day to 14-day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high. **DO NOT** apply more than 22 ozs/A (0.968 lb boscalid) per year.

Under some conditions, the use of additives or adjuvants may improve the performance of **Endura**.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** before alternating to a labeled fungicide with a different mode of action.

\*\* Not registered for use in California.

#### **Restrictions and Limitations**

- DO NOT use harvested seed for sprouting.
- Processed seed must be labeled "Not for human or animal consumption" at the processing plant. All alfalfa seed screenings must be disposed of in such a way that they cannot be distributed or used for food or feed.
- No portion of treated plant used for seed production may be grazed, used, or distributed for food or feed purposes.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Beans, dried and succulent	Ascochyta blight (Phoma exigua,	6	2*	22	21 (Dried Beans)
Broad bean Chickpea (garbanzo bean)	Ascochyta spp.)  Botrytis gray mold (Botrytis cinerea)	8 to 11	_		7 (Succulent Beans)
Guar Jack bean Lablab bean	White mold (Sclerotinia sclerotiorum)				
Lupinus spp. Grain lupin Sweet lupin White lupin White sweet lupin	Solorottorarry				
Phaseolus spp. Field bean Kidney bean Lima bean Navy bean Pink bean Pinto bean Runner bean Snap bean Tepary bean Wax bean					
Vigna spp. Adzuki bean Asparagus bean Blackeyed pea Catjang Chinese longbean Cowpea Crowder pea Moth bean Mung bean Rice bean Southern pea Urd bean					
Yardlong bean					

(continued)

#### Table 3. Endura® fungicide Crop-specific Requirements (continued)

#### Beans, dried and succulent (continued)

**Application Directions.** Apply **Endura** at the beginning of flowering or prior to onset of disease. Use the higher rate for extended protection and maximum yield benefit. Apply a second time at full bloom if conditions are favorable for disease development or if heavy disease has already set in.

Ascochyta blight in chickpeas develops quickly once established, so early detection and application is essential to reduce losses.

Apply at the beginning of flowering. Make a second application 7 to 10 days later if disease persists or weather conditions are favorable for disease development.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (22 ozs/A contains 0.968 lb boscalid) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** before alternating to a labeled fungicide with a different mode of action.

**Restrictions and Limitations. DO NOT** feed treated pea commodities to livestock.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Brassica, head and stem  Broccoli Brussels sprouts Cabbage Chinese cabbage (napa) Cauliflower Cultivars, varieties and/or hybrids of these	Alternaria blight (Black spot) (Alternaria spp.) Gray mold (Botrytis cinerea) Sclerotinia stem rot (Sclerotinia sclerotiorum, S. minor) Suppression Only: Powdery mildew (Erysiphe polygoni) Rhizoctonia bottom rot (Rhizoctonia solani)	6 to 9	2*	18	0

**Application Directions.** Begin applications of **Endura** prior to disease development and continue on a 7-day to 14-day interval. Use the higher rate and the shorter interval when disease pressure is high.

<sup>\*</sup> **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (18 ozs/A contains 0.792 lb boscalid) is not exceeded.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Brassica, leafy greens (except watercress)	Alternaria blight (Black spot) (Alternaria spp.)	6 to 9	2*	18	14
Broccoli, Chinese Broccoli raab Cabbage, Chinese, bok choy Cabbage, seakale** Collards Hanover salad** Kale Maca, leaves** Mizuna Mustard greens Radish, leaves** Rape greens Rocket, wild** Shepard's purse**	Gray mold (Botrytis cinerea)  Sclerotinia stem rot (Sclerotinia sclerotiorum, S. minor)  Suppression Only:  Powdery mildew (Erysiphe polygoni)  Rhizoctonia bottom rot (Rhizoctonia solani)				
Cultivars, varieties and/or hybrids of these					
Arugula** Cress** (garden and upland) Cultivars, varieties and/or hybrids of these	Alternaria leaf spot (Alternaria spp.) Ascochyta leaf spot (Ascochyta spp.) Phoma (Phoma spp.) Powdery mildew (Erysiphe spp.)	4.5 to 9			
	Botrytis rot (Botrytis spp.) Sclerotinia rot and blight (Sclerotinia spp.)	7 to 9			

**Application Directions.** Begin applications of **Endura** prior to disease development and continue on a 7-day to 14-day interval. Use the higher rate and the shorter interval when disease pressure is high.

<sup>\*</sup> **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (18 ozs/A contains 0.792 lb boscalid) is not exceeded.

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

 Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Garlic, bulb Leek Onion, Beltsville bunching Onion, bulb Onion, Chinese, bulb Onion, fresh Onion, green Onion, macrostem Onion, pearl Onion, potato, bulb Onion, tree, tops Onion, Welsh, tops Shallot, bulb Shallot, fresh leaves Cultivars, varieties and/or hybrids of these	Botrytis leaf blight (Botrytis spp.) Purple blotch (Alternaria porri)	6.8	6	41 (In-furrow plus foliar)	7

**Application Directions.** For control of purple blotch and Botrytis leaf blight, begin applications of **Endura** prior to disease development and continue on a 7-day to 14-day interval. Use the shorter interval when disease pressure is high.

**DO NOT** apply more than 41 ozs/A (1.80 lbs boscalid) per year. **DO NOT** make more than six (6) applications of **Endura** per year.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

# Instructions for In-furrow Use to Aid in the Control of Soilborne White Rot (Sclerotium cepivorum) in the Bulb Vegetable Group, including Garlic and Onions

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Bulb vegetable  Garlic, bulb Leek Onion, Beltsville bunching Onion, bulb Onion, Chinese, bulb Onion, fresh Onion, green Onion, macrostem Onion, pearl Onion, potato, bulb Onion, tree, tops Onion, Welsh, tops Shallot, bulb Shallot, fresh leaves Cultivars, varieties and/or hybrids of these	White rot (Sclerotium cepivorum)	6.8	6	41 (In-furrow plus foliar)	7

**Application Directions.** Apply **Endura** at planting as an in-furrow spray by directing spray pattern to the soil bed. Use a 4- to 6-inch band spray pattern applied directly over/into the seed furrow before covering with soil. Depending upon the level of potential infection, make additional foliar applications at the 6.8 ozs/A rate. Use a minimum volume of application of 5 gallons of water per acre.

Apply no more than a total of 41 ozs/A (1.80 lbs boscalid) per year for a combination of the in-furrow and foliar uses.

**DO NOT** make more than six (6) applications of **Endura** per year.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Celery Celery (Chinese)	Alternaria leaf spot (Alternaria spp.)	4.5 to 9	2*	18	0
	Suppression Only:				
	Powdery mildew (Erysiphe spp.)				
	Botrytis rot (Botrytis spp.)	8 to 9			
	Phoma (Phoma spp.)				
	Sclerotinia rot and blight (Sclerotinia spp.)				
	Pink rot (Sclerotinia sclerotiorum)				
	Suppression Only:				
	Crater rot (Rhizoctonia solani)				

**Application Directions.** Begin applications of **Endura** prior to the onset of disease development and continue on a 7-day interval. For pink rot and crater rot, make the first application just prior to row closure with a subsequent application two weeks later. Use the higher rate when disease pressure is high.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (18 ozs/A contains 0.792 lb boscalid) is not exceeded.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Celtuce**	Alternaria leaf spot (Alternaria spp.)	4.5 to 9	2*	18	0
	Ascochyta leaf spot (Ascochyta spp.)				
	Phoma (Phoma spp.)				
	Powdery mildew (Erysiphe spp.)				
	Botrytis rot (Botrytis spp.)	7 to 9			
	Sclerotinia rot and blight (Sclerotinia spp.)				

**Application Directions.** Begin applications of **Endura** prior to the onset of disease development and continue on a 7-day interval. Use the higher application rate when disease pressure is high.

No restriction on livestock grazing or feeding.

<sup>\*</sup> **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (18 ozs/A contains 0.792 lb boscalid) is not exceeded.

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

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Citrus fruit [group 10-10]*  Australian desert lime Australian finger lime Australian round lime Brown River finger lime Calamondin Chironja Citron Citrus hybrids Grapefruit Japanese summer grapefruit Kumquat Lemon Lime Mediterranean mandarin Mount white lime New Guinea wild lime Orange, sour Orange, sour Orange, sweet Pummelo Russell River lime Satsuma mandarin Sweet lime Tachibana orange Tahiti lime Tangelo Tangerine (mandarin) Tangor Trifoliate orange Uniq fruit Cultivars, varieties and/or hybrids of these	Alternaria brown spot (Alternaria alternata, Alternaria spp.) Greasy spot (Mycosphaerella citri) Melanose (Diaporthe citri) Scab (Elsinoe fawcettii) Suppression Only: Postbloom Fruit Drop (Colletotrichum spp.)	6.8	4	27.2	0

**Application Directions.** Begin **Endura** applications prior to infection and continue on a 10-day to 21-day interval. Use the shorter interval when disease pressure is high.

Disease control from **Endura** depends on disease pressure and various cultural practices that influence rind maturation and disease susceptibility. Improved disease performance may result when **Endura** is used in a crop management program that minimizes rind overmaturity and rind damage.

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

**DO NOT** apply more than 27.2 ozs/A (1.20 lbs boscalid) per year. **DO NOT** make more than four (4) applications of **Endura** per year.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** before alternating to a labeled fungicide with a different mode of action.

\* Not registered for use in California.

 Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Cucurbit vegetable [group 9]	Alternaria blight (Alternaria cucumerina)	6.5	4	26	0
Chayote Chinese waxgourd Citron melon Cucumber	Gummy stem blight (Didymella bryoniae)  Suppression Only:				
Gherkin Pumpkin Watermelon	Powdery mildew (Sphaerotheca fuliginea,				
Edible gourd Chinese okra Cucuzza Hyotan	Erysiphe cichoracearum)				
Momordica spp. Balsam apple Balsam pear Bitter melon Chinese cucumber					
Muskmelon Cantaloupe Casaba Crenshaw melon Golden pershaw melon Honeydew melon Honey balls Mango melon Persian melon Pineapple melon Santa Claus melon Snake melon					
Summer squash Crookneck squash Scallop squash Straightneck squash Vegetable marrow Zucchini					
Winter squash Acorn squash Butternut squash Calabaza Hubbard squash Spaghetti squash					
Cultivars, varieties and/or hybrids of these					

(continued)

#### Table 3. Endura® fungicide Crop-specific Requirements (continued)

#### Cucurbit vegetable [group 9] (continued)

**Application Directions.** Begin applications of **Endura** prior to disease development and continue on a 7-day to 14-day interval. Use the shorter interval when disease pressure is high.

**DO NOT** apply more than 26 ozs/A (1.14 lbs boscalid) per year. **DO NOT** make more than four (4) applications of **Endura** per year.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than one (1) application of **Endura** before alternating to a labeled fungicide with a different mode of action for at least one (1) application.

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Fennel (Florence)**	Alternaria leaf spot (Alternaria spp.)	4.5 to 9	2*	18	0
	Ascochyta leaf spot (Ascochyta spp.)				
	Phoma (Phoma spp.)				
	Powdery mildew (Erysiphe spp.)				
	Botrytis rot (Botrytis spp.)	7 to 9			
	Sclerotinia rot and blight (Sclerotinia spp.)				

**Application Directions.** Begin applications of **Endura** prior to the onset of disease development and continue on a 7-day interval. Use the higher application rate when disease pressure is high.

No restriction on livestock grazing or feeding.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (18 ozs/A contains 0.792 lb boscalid) is not exceeded.

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

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Fruiting vegetable  Eggplant Groundcherry Pepino Pepper (all varieties) Tomatillo	Early Blight (Alternaria solani)	2.5 to 3.5 or 2.5 to 3.5 ozs per 100 gallons of spray volume (dilute)*	6	21	0
Cultivars, varieties and/or hybrids of these	Target spot (Corynespora cassiicola)	3.5			
	Suppression Only:  Botrytis gray mold** (Botrytis cinerea)				
Tomato Cultivars, varieties and/or hybrids	Early Blight (Alternaria solani)	2.5 to 3.5 or 2.5 to 3.5 ozs per 100 gallons of spray volume (dilute)*	6		
	Target spot (Corynespora cassiicola)	3.5			
	Black mold (Alternaria alternata)	3.5 to 5	5	25	
	Botrytis gray mold (Botrytis cinerea)	9 to 12.5	2		
	Sclerotinia stem rot/ Timber rot** (Sclerotinia sclerotiorum)	12.5			

**Application Directions.** Begin applications of **Endura** prior to disease development and continue on a 7-day to 14-day interval for early blight, Botrytis gray mold, and black mold. Use the higher rate and the shorter interval when disease pressure is high.

**DO NOT** apply more than 21 ozs/A (0.924 lb boscalid) per year to any fruiting vegetable, except tomato. **DO NOT** apply more than 25 ozs/A (1.10 lbs boscalid) per year to tomato. **DO NOT** make more than six (6) applications of **Endura** at the lowest rate or two (2) applications of **Endura** at the highest rate per year.

<sup>\*</sup> For applications based on dilute volume, spray plants to runoff. Apply a minimum of 20 gallons of spray volume per acre, and increase the spray volume as the plants grow during the season. Spray volume must be proportional to the amount of plant tissue such that 100 gallons of spray per acre is used on mature plants.

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

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Grape	Powdery mildew (Uncinula necator)	4.5	5	24	14
	Botrytis gray mold (Botrytis cinerea)	8	3		

**Application Directions.** For powdery mildew control, begin applications of **Endura** at budbreak or prior to the onset of disease and continue on a 10-day to 14-day interval. Use the shorter interval when disease pressure is high.

For the control of Botrytis gray mold, begin applications of **Endura** prior to disease development and when conditions favor disease development during early bloom, bunch pre-closure or veraison.

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

**DO NOT** apply more than 24 ozs/A (1.06 lbs boscalid) per year. **DO NOT** make more than five (5) applications of **Endura** at the low rate or three (3) applications of **Endura** at the high rate per year.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** before alternating to a labeled fungicide with a different mode of action.

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Kohlrabi	Alternaria blight (Black spot) (Alternaria spp.)	6 to 9	2*	18	0
	Gray mold (Botrytis cinerea)				
	Sclerotinia stem rot (Sclerotinia sclerotiorum, S. minor)				
	Suppression Only:				
	Powdery mildew (Erysiphe polygoni)				
	Rhizoctonia bottom rot (Rhizoctonia solani)				

**Application Directions.** Begin applications of **Endura** prior to the onset of disease development and continue on a 7-day to 14-day interval. Use the higher rate and the shorter interval when disease pressure is high.

<sup>\*</sup> **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (18 ozs/A contains 0.792 lb boscalid) is not exceeded.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Leaf petiole vegetables**	Alternaria leaf spot (Alternaria spp.)	4.5 to 9	2*	18	0
Cardoon Rhubarb	Ascochyta leaf spot (Ascochyta spp.)				
Cultivars, varieties and/or hybrids of	Phoma (Phoma spp.)				
these	Powdery mildew (Erysiphe spp.)				
	Botrytis rot (Botrytis spp.)	7 to 9			
	Sclerotinia rot and blight (Sclerotinia spp.)				

**Application Directions.** Begin applications of **Endura** prior to the onset of disease development and continue on a 7-day interval. Use the higher application rate when disease pressure is high.

No restriction on livestock grazing or feeding.

\*DO NOT make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (18 ozs/A contains 0.792 lb boscalid) is not exceeded.

<sup>\*\*</sup> Not registered for use in California except for celery. See separate table for celery and Chinese celery use rates and application directions.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Amaranth, Chinese Amaranth, leafy Chervil, fresh leaves Chrysanthemum, garland Corn salad Dandelion, leaves Dock Endive Orach Parsley, fresh leaves	Alternaria leaf spot (Alternaria spp.) Ascochyta leaf spot (Ascochyta spp.) Phoma (Phoma spp.) Powdery mildew (Erysiphe spp.) Botrytis rot (Botrytis spp.) Sclerotinia rot and blight (Sclerotinia spp.)	4.5 to 9 7 to 9	2*	18	14

**Application Directions.** Begin applications of **Endura** prior to the onset of disease development and continue on a 7-day interval. Use the higher application rate when disease pressure is high.

No restriction on livestock grazing or feeding.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (18 ozs/A contains 0.792 lb boscalid) is not exceeded.

<sup>\*\*</sup> Not registered for use in California except on radicchio for control of Sclerotinia rot and blight when applied at a rate of 9 ozs/A. See separate crop table for head and leaf lettuce use rates and application directions.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Lettuce Head and Leaf	Botrytis rot (Botrytis cinerea)	8 to 11	2	22	14
	Lettuce drop (Sclerotinia minor, S. sclerotiorum)				
	Phoma basal rot (Phoma exigua)				
	Suppression Only:				
	Lettuce powdery mildew (Erysiphe cichoracearum)				
	Rhizoctonia bottom rot (Rhizoctonia solani)				

**Application Directions.** A protective fungicide barrier is needed to maximize disease control. Use the higher rate when disease pressure is high.

#### At Planting or Preemergence Applications for Sclerotinia Control

For chemigation applications, apply as outlined in the **Directions For Use Through Sprinkler Irrigation Systems** section in this label. Light incorporation by cultivation can increase the performance.

#### Post-emergence Applications for Control of Sclerotinia and other Diseases

Apply **Endura** on direct-seeded lettuce immediately after emergence or prior to disease development. On transplanted lettuce, make the first application immediately after transplanting or prior to the onset of disease.

Make a second application if the soil surface is disturbed by cultivation or thinning and if conditions continue to favor disease development.

**DO NOT** apply more than 22 ozs/A (0.968 lb boscalid) per year.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) applications of **Endura** per year.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Peanut	Early leaf spot (Cercospora arachidicola)	6.5 to 10	3*	30	14
	Late leaf spot (Cercosporidium personatum)				
	Sclerotinia blight (Sclerotinia minor)	8 to 10			
	Web blotch (Phoma arachidicola)				
	Suppression Only:				
	Sclerotium stem rot, Southern stem rot (Sclerotium rolfsii)				

**Application Directions.** For control of early and late leaf spot and web blotch, begin applications of **Endura** prior to the onset of disease and continue on a 14-day interval.

For control of Sclerotinia blight, begin applications of **Endura** prior to the onset of disease or at 45 to 60 days after planting. Make a second application 14 to 21 days later.

For suppression of Southern stem rot (*Sclerotium rolfsii*), apply **Endura** prior to disease development or at 45 to 60 days after planting. Two additional applications may be made at 14-day intervals. For improved control of Southern stem rot, **Endura** may be mixed with other labeled, effective fungicides.

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

**DO NOT** make more than three (3) applications of **Endura** per year at the highest rate.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (30 ozs/A contains 1.32 lbs boscalid) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** before alternating to a labeled fungicide with a different mode of action.

#### **Restrictions and Limitations**

- DO NOT apply by air.
- DO NOT feed peanut hay to livestock.
- **DO NOT** graze or harvest for forage use.

**Table 3. Endura® fungicide Crop-specific Requirements** (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Peas, dried shelled Lentil (Lens) Pea (Pisum) Field pea Garden pea Green pea Pigeon pea	Alternaria leaf and pod spot (Alternaria spp.) Ascochyta blight (Phoma exigua, Ascochyta spp.)	6	2*	22	21
	Botrytis gray mold (Botrytis cinerea)  Mycosphaerella blight (Mycosphaerella spp.)	8 to 11			
	White mold (Sclerotinia sclerotiorum)  Suppression Only:				
	Powdery mildew (Erysiphe polygoni)				

**Application Directions.** For optimal disease control, begin applications of **Endura** prior to disease development or at the beginning of flowering and repeat on a 5-day to 14-day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

Ascochyta blight in lentils develops quickly once established, so early detection and application is essential to reduce losses.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (22 ozs/A contains 0.968 lb boscalid) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** per year.

**Restrictions and Limitations. DO NOT** feed treated pea commodities to livestock.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Peas, succulent	Alternaria leaf and	6	2*	22	7
Edible-podded peas	pod spot (Alternaria spp.)				
Pea (Pisum) Dwarf pea Edible-pod pea	Ascochyta blight (Phoma exigua, Ascochyta spp.)				
Snow pea Sugar snap pea Pigeon pea	Botrytis gray mold (Botrytis cinerea)	8 to 11			
Soybean (immature seed) (Edamame, vegetable soybean)	Cercospora spp.**  Mycosphaerella blight  (Mycosphaerella spp.)				
Sword bean Succulent shelled	White mold (Sclerotinia sclerotiorum)				
peas	,				
Pea (Pisum) English pea Garden pea Green pea Pigeon pea	Powdery mildew (Erysiphe polygoni)				

**Application Directions.** For optimal disease control, begin applications of **Endura** prior to disease development or at the beginning of flowering and repeat on a 5-day to 14-day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (22 ozs/A contains 0.968 lb boscalid) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** before alternating to a labeled fungicide with a different mode of action.

**Restrictions and Limitations. DO NOT** feed treated pea commodities to livestock.

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

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Potato	Brown spot (Alternaria alternata)	3.5 to 4.5	4	20	10
	Early blight (Alternaria spp.)				
	White mold (Sclerotinia sclerotiorum)	5.5 to 10	2*		
	Suppression Only:				
	Gray mold (Botrytis cinerea)				

**Application Directions.** For control of *Sclerotinia* white mold, begin applications of **Endura** prior to infection. Infection often begins when the rows start to close and/or when the plants start flowering. Make a second application 14 days later if conditions continue to be favorable for disease development. Use the higher rates when disease has been confirmed in your area or weather conditions are conducive to disease development.

For control of *Alternaria* early blight or suppression of *Botrytis* gray mold, begin applications of **Endura** prior to the onset of disease and continue applications at 7-day to 14-day intervals if conditions continue to be favorable for disease development.

The use of additives or adjuvants may improve the performance of **Endura**. For additional details and precautions, refer to **Additives and Tank Mixing Information**.

No restriction on livestock grazing or feeding.

**DO NOT** make more than four (4) applications of **Endura** at the lowest rate or two (2) applications of **Endura** at the highest rate per year.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (20 ozs/A contains 0.880 lb boscalid) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** before alternating to a labeled fungicide with a different mode of action.

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Rapeseed (cultivars, varieties and/or hybrids, including canola and crambe)	White mold/ Sclerotinia stem rot (Sclerotinia sclerotiorum)	5 to 6	2	12	21

**Application Directions.** Begin applications of **Endura** at 20% to 50% flowering or prior to the onset of disease. Use the higher rate for extended protection. Apply a second time if conditions continue to be favorable for disease development.

No restriction on livestock grazing or feeding.

**DO NOT** apply more than 12 ozs/A (0.528 lb boscalid) per year.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** per year.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Root and tuber vegetables Root vegetables (except sugar beet) [subgroup 1B]*	Alternaria leaf spot (Alternaria dauci, Alternaria spp.)  Powdery mildew (Erysiphe spp.)	4.5	5	23.4	0
Beet, garden Burdock, edible Carrot Celeriac Chervil, turnip-rooted Chicory Ginseng Horseradish Parsley, turnip-rooted Parsnip Radish Radish, oriental Rutabaga Salsify Salsify, black Salsify, Spanish Skirret Turnip	Cottony rot, White rot of rhizomes, Watery soft rot (Sclerotinia sclerotiorum) Gray mold rot (Botrytis cinerea)	7.8	3		

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

**DO NOT** apply more than 23.4 ozs/A (1.03 lbs boscalid) per year. **DO NOT** make more than five (5) applications of **Endura** per year.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** before alternating to a labeled fungicide with a different mode of action for at least one application.

**Restrictions and Limitations. DO NOT** use on sugar beet.

\* Not registered for use in California except on carrot, celeriac, ginseng, horseradish, and skirret.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Root and tuber vegetables	Early blight (Alternaria solani)	2.5 to 4.5	4	20	10
Tuberous and corm vegetables [subgroup 1C] Arrowroot Chinese artichoke Jerusalem artichoke Edible canna Chayote (root) Ginger Leren Sweet potato Turmeric Yam bean True yam	Sclerotinia white mold (Sclerotinia sclerotiorum)	5.5 to 10	2*		

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

**DO NOT** make more than four (4) applications of **Endura** at the lowest rate or two (2) applications of **Endura** at the highest rate per year.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (20 ozs/A contains 0.880 lb boscalid) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** before alternating to a labeled fungicide with a different mode of action for at least one application.

**Restrictions and Limitations. DO NOT** use on sugar beet.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Soybean**	Alternaria leaf spot (Alternaria spp.)	3.5 to 5.5	2*	22	21
	White mold (Sclerotinia sclerotiorum)	5.5 to 11			
	Suppression Only:	5.5			
	Brown spot (Septoria glycines)				
	Cercospora blight and leaf spot (Cercospora kikuchii)				
	Frogeye leaf spot (Cercospora sojina)				
	Rhizoctonia aerial blight (Rhizoctonia solani)				

**Application Directions.** Begin applications of **Endura** prior to disease development or when conditions are conducive for disease development and continue on a 7-day to 14-day interval. Use the shorter interval when disease pressure is high.

For control of white mold under heavy disease pressure, use higher rates of **Endura** (8.0 to 11.0 ozs/A).

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (22 ozs/A contains 0.968 lb boscalid) is not exceeded.

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

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (ozs/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Sunflower**	Suppression Only:	6 to 9	2*	18	21
	Sclerotinia head rot (Sclerotinia sclerotiorum)				

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

No restriction on livestock grazing or feeding.

\* **DO NOT** make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (18 ozs/A contains 0.792 lb boscalid) is not exceeded.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** make more than two (2) sequential applications of **Endura** before alternating to a labeled fungicide with a different mode of action.

\*\* Not registered for use in California.

Table 3. Endura® fungicide Crop-specific Requirements (continued)

Crop	Target Disease	Product Use Rate per Application (OZS/A)	Maximum Number of Applications per Year	Maximum Product Rate per Year (OZS/A)	Minimum Time from Application to Harvest (PHI) (days)
Swiss chard**	Alternaria leaf spot (Alternaria spp.)	4.5 to 9	2*	18	0
	Ascochyta leaf spot (Ascochyta spp.)				
	Phoma ( <i>Phoma</i> spp.)				
	Powdery mildew (Erysiphe spp.)				
	Botrytis rot (Botrytis spp.)	7 to 9			
	Sclerotinia rot and blight (Sclerotinia spp.)				

**Application Directions.** Begin applications of **Endura** prior to the onset of disease development and continue on a 7-day interval. Use the higher application rate when disease pressure is high.

No restriction on livestock grazing or feeding.

<sup>\*</sup>DO NOT make more than the Maximum Number of Applications per Year for applications made at the maximum Product Use Rate per Application. Additional applications per year are permitted when a lower Product Use Rate per Application is used, as long as the Maximum Product Rate per Year (18 ozs/A contains 0.792 lb boscalid) is not exceeded.

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

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

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

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

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