FUNGICIDE

IE IN EVEC.

ACTIVE INGREDIENT:	% BY WT.
Propiconazole: 1-[[2-(2,4-dichlorophenyl)-4-propyl-	
1,3-dioxolan-2-yl]Methyl]-1H-1,2,4-triazole	40.85%
OTHER INGREDIENTS:	<u>59.15%</u>
TOTAL	100.00%
Bumper ES contains 3.6 lbs of active ingredient per	gallon

EPA REG. NO. 66222-241

EPA EST. NO. 37429-GA-001^{BT} 37429-GA-00280

Letter(s) in lot number correspond(s) to letter(s) in EPA Est. No.

KEEP OUT OF REACH OF CHILDREN **CAUTION**

Si usted no entiende la etiqueta, busque a alquien 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.)

FIRST AID

- IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice.
 - Have person sip a glass of water if able to swallow.
 - . Do not induce vomiting unless told to do so by a poison control center or doctor.
 - . Do not give anything to an unconscious person.

IF IN EYES:	 Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

Hold ave open and rince clowly and gen-

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact Prosar at 1-877-250-9291 for emergency medical treatment information.

NOTE TO PHYSICIAN: There is no specific antidote for this product. Induce emesis or lavage stomach, taking care to avoid aspiration of stomach contents into lungs.

For additional precautionary, handling, and use tatements. see inside of this booklet.



Manufactured for: Makhteshim Agan of North America, Inc. 3120 Highwoods Blvd Suite 100 Raleigh, NC 27604

XXXXXXX EPA 043012/Notif 052912/Rev A

Net Contents: 2.5 Gallons

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PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, using tobacco or using the toilet. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Avoid breating spray mist. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category ${\bf G}$ on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- . Chemical-resistant gloves, such as barrier laminate or Viton
- · Shoes plus socks

USER SAFFTY REQUIREMENTS

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

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 170.240Id)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFFTY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate. Refer to product labeling for use restrictions to protect endangered species.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill, or store near heat or open flame. Do not use with or store near any oxidizing agents.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

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

- Coveralls
- Chemical-resistant gloves, such as barrier laminate or Viton
- · Shoes plus socks

INFORMATION

Bumper® ES is a broad spectrum fungicide for the control of specified diseases in labeled crops. Do not use this product in greenhouses or as a tree injection.

When an adjuvant is to be used with this product, Makhteshim Agan of North America, Inc. suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

SPRAY EQUIPMENT

In general, the most effective disease control is achieved when applications are made using sufficient water volume to provide thorough and uniform coverage.

To avoid spray drift, do not apply when conditions favor drift beyond the target area. Do not allow spray overlap as crop injury may occur.

Air-assisted or air-blast sprayers use a forced air stream to move spray droplets into the canopy. Set up the fan to deliver only enough air volume to penetrate the canopy and provide good coverage. Adjust deflectors or other aiming devices to direct spray only to the target area.

Equip sprayers with nozzles that provide accurate and uniform application. Be certain that nozzles are the same size and uniformly spaced across the boom. Calibrate sprayer before use.

Use a pump with capacity to maintain 35-40 psi at nozzles and provide sufficient agitation in tank to keep mixture in suspension. Use a jet agitator, liquid sparger tube, or mechanical paddle for agitation. Do not air sparge.

Although Bumper ES is an emulsifiable concentrate, it is suggested that screens be used to protect the pump and to prevent nozzles from clogging. Screens placed on suction side of pump should be 16 mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

For more information on spray equipment and calibration, consult sprayer manufacturers and state recommendations. For specific local directions and spray schedules, consult the current state agricultural experiment station recommendations.

APPLICATION INSTRUCTIONS

For best results, sufficient water volume should be used to provide thorough coverage. In most situations, Bumper ES is most effective when applied and allowed to dry before a rainfall. Avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur. Do not apply directly to humans or animals.

Aerial Application: For those crops other than tree crops where aerial applications are indicated, apply in a minimum of 2 gals of water per acre, unless specified otherwise in the APPLICATION INSTRUCTIONS section of this label. For tree crops, use the higher volume on large trees, using a minimum of 5 to 10 gals of water per acre unless specified otherwise in the APPLICATION INSTRUCTIONS section of this label.

Ground Application: For tree crops, use a minimum of 50 gals of water per acre unless specified otherwise in the APPLICATION INSTRUCTIONS sec-

tion of this label. For all other crops, apply Bumper ES by ground equipment in a minimum of 10 gals of water per acre unless specified otherwise in the APPLICATION INSTRUCTIONS section of this label.

Chemigation: Apply Bumper ES through irrigation equipment only to crops for which chemigation is specified on this label or on approved supplemental labeling provided by Makhteshim Agan of North America, Inc. Apply in 0.1 to 0.25 inches of water. Chemigation with excessive water may negatively impact efficacy of the product.

Precaution(s): Do not inject Bumper ES at full strength or deterioration of valves and seals may occur. Use a dilution ratio of at least 10 parts water to 1 part Bumper ES. Bumper ES is corrosive to many seal materials. Leather seals are best. EPDM or silicone rubber seals can be used but should be replaced once a year. Do not use Viton, Buna-N, Neoprene, or PVC seals.

Bumper ES, alone or in combination with other pesticides which are registered for application through irrigation systems, may be applied through irriation systems.

Apply this product only through center pivot, solid set, hand move, or moving wheel irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

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.

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 should the need arise.

Irrigation System Operating Instructions

- The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick closing check-valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

. Do not apply when wind speed favors drift beyond the area intended.

Center Pivot Irrigation Equipment

Use only with drive systems which provide uniform water distribution. Do not use end guns when applying Bumper ES through center pivot systems because of non-uniform application.

- . Determine the size of the area to be treated.
- Determine the time required to apply 1/8-1/2 inch of water over the area to
 be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. When applying Bumper ES through irrigation equipment, use the lowest obtainable
 water volume while maintaining uniform distribution. Run the system at
 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of Bumper ES required to treat the area covered by the irrigation system.
- Add the required amount of Bumper ES and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection
 of the Bumper ES solution. Time the injection to last at least as long as it
 takes to bring the system to full pressure.
- Maintain constant solution tank agitation during the injection period.
- Continue to operate the system until the Bumper ES solution has cleared the sprinkler head.

Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

- . Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20- to 30-minute interval. When applying Bumper ES through irrigation equipment, use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of Bumper ES required to treat the area covered by the irrigation system.
- Add the required amount of Bumper ES into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the Bumper ES solution has cleared the last sprinkler head.

Banded Application: For banded applications, the treated area is the area covered by the band, not total cropland planted. The following formula can be used to calculate the amount of Bumper ES needed per acre of crop when banded applications are made:

Band width in inches
needed per acre of field
Row spacing in inches

x Broadcast rate per acre = Amount

MIXING INSTRUCTIONS

Prepare no more spray mixture than is required for the immediate operation. Thoroughly clean spray equipment before using this product. Agitate the spray solution before and during application. Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

Bumper ES Alone: Add 1/2-2/3 of the required amount of water to the spray or mixing tank. With the agitator running, add the Bumper ES to the tank. Continue agitation while adding the remainder of the water. Begin application of the spray solution after the Bumper ES has completely dispersed into the mix water. Maintain agitation until all of the mixture has been sprayed.

Bumper ES + Tank Mixtures: Bumper ES is usually compatible with most insecticides, fungicides, and foliar nutrients; however, do not mix Bumper ES with Syllit®, or crop injury may occur.

To determine the physical compatibility of Bumper ES with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powder and water-dispersible granular products first, the liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

Add 1/2 - 2/3 of the required amount of water to the spray or mixing tank. With the agitator running, add the tank mix partner into the tank. Allow the material to completely dissolve and disperse into the mix water. Continue agitation while adding the remainder of the water and Bumper 4 VC to the spray tank. Allow the Bumper ES to completely disperse. Spray the mixture with the agitator running.

If using Bumper ES in a tank mixture, observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank mix product label. Do not exceed any label dosage rates, and always follow the most restrictive label precautions and limitations. Do not mix this product with any product whose label prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are registered.

ROTATIONAL CROPS

Alfalfa can be planted 75 days after the last Bumper ES application if the total application of propiconazole has not exceeded 0.22 lb active ingredient per acre during the previous year. Do not plant any other crop intended for food, grazing, or any component of animal feed or bedding within 105 days of Bumper ES application to the preceding crop unless the second crop appears on this label.

RESISTANCE MANAGEMENT

Bumper ES is effective in controlling pests and minimizing the development of resistance when used in rotation with other fungicides in an IPM program. To reduce selection pressure for resistant pests:

- Use Bumper ES in rotation with classes of fungicides with different modes of action.
- Use Bumper ES as part of a pest management program that includes cultural and biological control where possible.
- Bumper ES is in the Group 3 class of fungicides. The mode of action for propiconazole, the active ingredient in this product, is as a demethylation inhibitor of sterol biosynthesis (DMI) which disrupts membrane synthesis by blocking demethylation. Resistance can develop when products with the same mode of action are used repeatedly.
- Consult your State or local agricultural pest control advisor(s) for pest control strategies established for your area.

APPLICATION INSTRUCTIONS

CROP	PESTS CONTROLLED	RATE OF APPLICATION PER ACRE	APPLICATION INSTRUCTIONS
ALMONDS	Brown Rot Blossom Blight (Monilinia laxa, M. fructicola)	4-8 fl oz	Apply Bumper ES in at least 15 gallons of spray per acre at 5-10% bloom and 50-100% bloom using ground or air equipment in sufficient volume to provide thorough coverage. Under severe disease conditions, use the highest rate. Minimum retreatment interval is 7 days.
	Anthracnose (Collec- totrichum acutatum)	8 fl oz	Apply Bumper ES in at least 15 gallons of spray per acre beginning at bud break using ground or air equipment in sufficient volume to provide thorough coverage on a 7-14 day interval.
	Do not apply more than Do not apply within 60	0.90 lb a.i. propic	per season of Bumper ES. onazole per acre per season. r cut treated cover crop for feed.
BANANAS AND PLANTAINS	Black Sigatoka (Mycosphaerella fijien- sis)	3 fl oz	Make applications before disease symptoms appear at the onset of the rainy season. Apply specified rate in 10 to 20 gallons of water per acre using ground or air application equipment. Make no more than 2 consecutive applications on a 21 to 25 day schedule before rotating to another labeled product with a different mode of action for at least 2 sprays. A maximum of 8 applications can be made. If possible, have at least 2 consecutive months "triazole free" during the period of lower disease pressure. Mixing Procedures Oil-in-Water Emulsion: Add the crop oil to the spray tank. Add the emulsifier (0.6 fl oz per gal of oil) and Bumper ES to the spray tank and mix thoroughly for 15 minutes. Oil Alone: Add crop oil to the spray tank. Add the Bumper ES to the spray tank and mix thoroughly for 5 minutes. Maintain agitation.
Do not apply Bur Do not apply mor Do not feed who		S on bananas or pl 24 fl oz of Bumper nas and plantains	of non-bagged bananas. antains unless they are protected by polyethylene bags. ES during each growing season (this includes any pre-harvest sprays). to animals. nazole per acre per season.
BEETS, GARDEN	Leaf Spot (Cereospora betieola) Powdery Mildew (Erysiphe polygoni)	3-4 fl oz	Begin applications at first sign of disease and repeat on a 14 day interval. Make no more than 2 consecutive applications before rotating to another registered fungicide with a different mode of action. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action. Applications are most effective when applied and allowed to dry before a rainfall. Use sufficient water volume to provide thorough coverage. Bumper ES can be applied by ground, air, or chemigation.
	Do not apply within 14 Do not apply more than Do not apply more than	16 fl oz per acre j	per season. onazole per acre per season.

CROP	PESTS CONTROLLED	RATE OF APPLICATION PER ACRE	APPLICATION INSTRUCTIONS
BERRIES* *Bushberries Highbush Blueberry, Lowbush Blueberry, HIghbush Cranberry, Black Currant, Red Currant, Elderberry, Gooseberry, Lin-	Mummyberry Disease (Monilin.ia vaccinico- rymbosi)	6 fl oz	Make first application beginning at green tip and repeat in 7 to 10 days. If conditions are favorable for disease development, additional applications may need to be made at pink bud and repeated every 7 to 10 days through petal fall.
	Leaf spot and Stem canker (Septoria albop- ucatate) Rust (Pucciniastrum vaccinii)	6 fl oz	Apply when conditions favor disease development. Repeat applications on a 4 week spray interval.
gonberry, Native Cur- rant, Cultivars, varieties,	Leaf and Cane Spot (Septoria rubi)	6 fl oz	Apply as a delayed dormant spray after training in the spring. Repeat this application in the late spring, again at bud break, and again once flowering has begun.
and/or hybrids of these. (See addi- tional crops below.)	Powdery Mildew (Microsphaera vac- cinii)	6 fl oz	Apply at 5-10% bloom. Repeat this application at full bloom and on a 14 day interval while conditions are favorable for disease development.
*Caneberries Blackberry, Logan-	Leaf Spot (Septoria spp.)	6 fl oz	Make first application any time prior to bloom and again after petal fall. If needed, repeat application just after harvest.
berry, Red and Black Raspberry, Wild Raspberry,	Cottonball (Monilinia oxycocci)	4-6 fl oz	Make the first application at leaf bud break and repeat in 7 to 10 days. Make the third application at early bloom and repeat in 7 to 10 days. Apply in 20 to 50 gals of water for ground application or 5 gals of water for aerial application. Under severe pressure, use the higher rate for control.
Unless directed otherwise for a specific pest, Bumper ES may be applied by eight of 15 gal per acre. Do not apply more than 30 fl oz per acre per season of Bumper ES. Do not apply within 30 days of harvest. Do not apply more than 0.84 lb a.i. propiconazole per acre per season.		·	
Low Growing Berries (See Straw- berry Section)			

Additional Bushberries: Aronia Berry, Buffalo Currant, Chilean Guava, European Barberry, Edible Honeysuckle, Huckleberry, Kostaberry, Juneberry (Saskatoon Berry), Salal, Sea Buckthorn.

Additional Caneberries: Bingleberry, Boysenberry, Dewberry, Lowberry, Marionberry, Olallieberry, Youngberry.

CROP	PESTS CONTROLLED	RATE OF APPLICATION PER ACRE	APPLICATION INSTRUCTIONS		
BULB	Purple Blotch	4-8 fl oz	Apply by ground in a minimum of 15 gals of water per acre or by air in a minimum of 5 gals of		
/EGETABLES	(Altemari porri)		water per acre. Begin applications when conditions favor disease development and con-		
Bulb Onions	Suppression of Botry-		tinue on a 7 to 10 day interval. Use the higher rate and shorter interval when disease condi-		
Garlic Bulb,	tis leaf blight (Botrytis	2-4 fl oz plus	tions are severe. In tank mix, apply specified rate in combination with another fungicide for		
Onion Bulb, Shallot Bulb	squamosa)	tank mix part- ner	control of Botrytis leaf blight or purple blotch. Begin applications when conditions favor disease development and continue on a 7 to 10 day interval or according to the tank mix partner's label. Use higher rates when disease conditions are severe. To achieve optimum con-		
Cultivars, varieties, and/or hybrids of			trol, use a wetting agent or a spreader/sticker.		
hese. (See addi-	Do not apply more th	an 16 fl oz of Bun	nper ES per acre per season.		
tional crops below.)			on dry bulb onions. Bumper ES may be applied on the day of harvest for green onion types. piconazole per acre per season.		
Green Onions					
Leek,					
Fresh Onion,					
Green Onion,					
Fresh Shallot					
Leaves					
Cultivars, varieties,					
and/or hybrids of					
these. (See addi-					
tional crops below.)					
Additional Green On	ions: Fresh Chive Leav	es, Fresh Chinese	rlic, Serpent Garlic, Lily, Chinese Onion, Pearl Onion, Potato Onion. e Chive Leaves, Host Elegans, Fritillaria Leaves, Kurrat, Lady's Leek, Wild Leek, Beltsville		
•	crostem Onion, Tree Top				
CARROTS	Leaf Blights (Cercospora carotae) (suppression of	4 fl oz	Apply when conditions favor disease development. Continue applications on a 7 to 10 day interval using the shorter interval when disease conditions are severe. If desired, a spreader-sticker may be used.		
	Alternaria dauci)	2 fl oz plus	Apply specified rate of Bumper ES with 0.75 lb a.i. of chlorothalonil per acre. Begin applica-		
	Powdery Mildew (Erysiphe polygoni)	chlorothalonil at 0.75 lb a.i.	tions when conditions favor disease development. Continue applications on a 7 to 10 day interval.		
	Bumper ES may be a	pplied by either g	round in a minimum of 15 gal per acre or air in a minimum of 5 gal per acre.		
	Do not apply more th				
	Do not apply within 14 days of harvest.				
	Do not apply more th	an 0.45 lb a.i. pro	piconazole per acre per season.		
CELERY AND LEAF	Early blight (Cer-	4 fl oz	Apply specified rate of Bumper ES on a 7 day schedule either by ground or air. If desired,		
PETIOLES SUBGROUP	cospora apii)		Bumper ES may be tank mixed with an appropriate spreader-sticker. Apply in 10 gals of		

• Do not apply more than 16 fl oz of Bumper ES per acre per crop season.

• Do not apply more than 0.45 lb a.i. propiconazole per acre per season.

water for ground application or 5 gals of water for aerial application.

Celery

Cardoon

Celtuce

Rhubarb Swiss Chard

Chinese Celery

Florence Fennel

Late blight (Septoria

Do not apply within 14 days of harvest.

apicola)

CROP	PESTS CONTROLLED	RATE OF APPLICATION PER ACRE	APPLICATION INSTRUCTIONS
CROP CEREALS Barley Rye Triticale Oats	Control of leaf diseases: Rusts (Puccinia spp.) Powdery mildew (Blumeria spp., Erysiphe spp.) Leaf blight (Septoria tritici) Glume blotch (Stagonospora nordorum) Tan spot (Pyrenophora tritici-repentis) Helminthosporium leaf blight (Drech-slera tritici-repentis) Spot blotch (Bipolaris sorokinina) Barley scald (Rhyn-chosporium secalis) Barley stripe (Pyrenophora graminea) Net blotch (Pyrenophora teres)	4 fl oz	Protecting the flag leaf is important for maximizing yield. When Bumper ES is applied at 50% to fully emerged, the highest yields are normally obtained. Applications may be made no closer than at 14 day intervals. The use of an oil based adjuvant may improve spray coverage.
	Early Season Sup- pression of: Tan spot Powdery mildew Glume blotch Leaf Blight (Septoria tritici)	2-4 fl oz	For early season leaf disease suppression, apply specified rate of Bumper ES for suppression of listed diseases. Apply in the spring. Make a second application up to Feekes growth stage 10.5 for season long control. Applications may be made no closer than a 14 day interval.
	Foot rot (<i>Pseudocer-cosporella</i> spp.)	4 fl oz	Apply specified rate of Bumper ES per acre plus half rates of other EPA-registered fungi- cides such as Topsin® M. Apply at tillering but before elongation has occurred.
	Fusarium head blight (suppression only)	4 fl oz	Apply Bumper ES at approximately 50% flowering. Addition of a penetrating type of adjuvant may increase Fusarium head blight suppression.
	Do not apply more that hay will be harvested Do not apply within 30	an 8 fl oz of Bump O days of harvest	nd, air, or chemigation equipment. Der ES per acre per season, but do not apply more than 4 fl oz per acre per season if forage or I for forage or hay, 45 days before harvest for grain and straw or for cereals other than wheat. piconazole per acre per season.

CROP	PESTS CONTROLLED	RATE OF APPLICATION PER ACRE	APPLICATION INSTRUCTIONS
CROP CEREALS Wheat	Control of leaf diseases: Rust (Puccinia spp.) Powdery mildew (Blume- ria spp., Erysiphe spp.) Leaf blight (Septoria tritici) Glume blotch (Stagonospora nordorum) Tan spot (Pyrenophora tritici-repentis) Helminthosporium leaf blight (Drechslera tritici-repen- tis) Spot blotch (Bipolaris sorokiniana) Net blotch (Pyrenophora teres)	4 fl oz	Protecting the flag leaf is important for maximizing yield. When Bumper ES is applied at 50% to fully emerged, the highest yields are normally obtained. Applications may be made no closer than at 14-day intervals. The use of an oil-based adjuvant may improve spray coverage. Bumper ES can be applied through full head emergence (Feekes growth stage 10.5). Do not apply after this stage to avoid possible illegal residues.
	Early Season Suppression of: Powdery mildew (Blumeria spp., Erysiphe spp.) Leaf Blight (Septoria tritici) Glume blotch (Stagonospora nordorum) Tan spot (Pyrenophora tritici-repentis)	2-4 fl oz	Apply in the spring. Make a second application up to Feekes growth stage 10.5 for season-long control. Applications may be made no closer than at 14-day intervals.
	Foot rot (<i>Pseudocer-cosporella</i> spp.)	4 fl oz	Apply Bumper ES per acre plus half rates of other EPA-registered fungicides such as thiophanate methyl. Apply at tillering but before elongation has occurred.
	Fusarium head blight (suppression only)	4 fl oz	Apply Bumper ES at approximately 50% flowering. Addition of a penetrating type of adjuvant may increase Fusarium head blight suppression.
	to provide thorough cove Specific Use Restrictions Do not apply within 30 d	rage. Application: s: lays for harvest fo	In then applied and allowed to dry before rainfall. For best results, sufficient water volume should be used s may be made using ground, air, or chemigation equipment.

- Do not apply more than 8 fl oz of Bumper ES per acre per season.

 Do not apply more than 4 fl oz per acre per season if forage or hay will be harvested.

 Do not apply more than 0.22 lb a.i. propiconazole per acre per season.

 Do not apply after Feekes growth stage 10.5 in wheat.

anan	PESTS	RATE OF APPLICATION	ADDI IGATION INSTRUCTIONS		
CROP	CONTROLLED	PER ACRE	APPLICATION INSTRUCTIONS		
CITRUS (non-bearing) Calamondin Citron Citron Citrus hybrids Grapefruit Kumquat Lemon Lime Mandarin Orange (sour and	Greasy Spot (Mycosphaerella citri)	6-8 fl oz	Begin applications in June. Apply at 30 day intervals through August. Bumper ES may be applied by either ground or aerial application in a minimum of 15 gal per acre.		
sweet)	Do not apply more than	24 fl oz ner acre ne	r season of Bumper ES		
Pummelo			able fruit within 12 months.		
Satsuma Mandarin Tangerine Including all cultivars and/or hybrids of these	Do not apply more than	0.67 lb a.i. propicor	nazole per acre per season.		
CORN	Helminthosporium leaf	2-4 fl oz	Apply when disease first appears and continue on a 7 to 14 day schedule. Use the low rate		
(field, seed,	blights (Helminthospo-		when disease pressure is low. Under heavy pressure or when conditions favor disease devel-		
and popcorn)	rium maydis, H. turci- cum, and H. carbonum)		opment, apply the high rate. Apply Bumper ES at specified rates by ground, air, or chemigation.		
SWEET CORN	Rusts (Puccinia spp.) Gray leaf spot (Cer- cospora zeae-maydis) Eye spot (Kabatiella zeae) • For field corn, field co	4 fl oz	Apply Bumper ES at specified rates by ground, air, or chemigation when rust pustules first appear and continue on a 7- to 14-day schedule when conditions favor disease development. For best disease control, early applications at initial disease onset perform better.		
	Do not apply more than 16 fl oz of Bumper ES per acre per season. Do not apply within 30 days of harvest for forage, grain, and stover.				
	Do not apply more than 8 fl oz of Bumper ES per acre per season on field corn harvested for forage.				
	Do not apply more than 0.45 lb a.i. propiconazole per acre per season. For sweet corn: Do not apply within 14 days of harvest for ears and 14 days of harvest for forage.				
CRANBERRIES (OR, WA, WI only)	Cottonball (Monilinia oxycocci)	4-6 fl oz	Make the first application at leaf bud break. Make the second application 14 days later. Make the third application at early bloom and repeat again in 14 days. Under severe pressure, use the higher rate for control. Bumper ES may be applied by either ground or aerial application equipment in a minimum of 20 gal per acre.		
	Do not apply more than 24 fl oz per acre per season of Bumper ES.				
	Do not apply within 4				
			piconazole per acre per season.		
FILBERTS (Hazel- nuts)	Eastern Filbert Blight (Anisogramma anomala)	5-8 fl oz	Begin applications when green leaf tissue becomes visible and continue at 14 to 21 day intervals. Under severe disease conditions, use the higher rate and shorter interval. On certain varieties, Bumper ES applications may cause smaller and/or greener leaves. Yields of filberts displaying these characteristics have not been reduced due to propiconazole treatments. Bumper may be applied by either ground or aerial application in a minimum of 15 gal per acre.		
			re per season of Bumper ES.		
			piconazole per acre per season		
	Do not apply within 60 days of harvest.				
	 Do not graze livestoc 	k in treated areas	s or cut treated crop for feed.		

CROP	PESTS CONTROLLED	RATE OF APPLICATION PER ACRE	APPLICATION INSTRUCTIONS
GRASSES GROWN FOR SEED (Nebraska, Oregon, Washington, Idaho, and Minnesota only)	Rusts (Puccinia spp.) Powdery mildew (Erysiphe spp.) Selenophoma stem eyespot (Selenophoma spp.) Ergot Suppression	4-8 fl oz	Apply Bumper ES at specified rates by ground, by air in a minimum of 10 gals of water per acre, or through irrigation equipment. Apply when powdery mildew and Selenophoma infections or rust pustules are noticeable and increasing in number in late spring or early summer. Repeat at 14 to 21 day intervals. To maximize control under severe rust pressure, use the higher rate of 8 fl oz per acre and make applications at 14 day intervals until the seed is mature. Make the last application at least 20 days before seed matures. For bluegrass, it is important to begin applications early in the growing season.
MINT	Do not feed hay cut v Do not graze treated Do not apply more the Rust (<i>Puccinia men</i> -	vithin 20 days of t areas within 140	days of the last application. piconazole per acre per season. Apply specified rate of Bumper ES in a minimum of 20 gals of water per acre using ground appli-
(Peppermint, Spearmint)	Do not apply within 7		cation. Begin applications when plants are 2 to 4 inches high or when conditions become favor- able for disease development. Make a second application 14 days after the first application.
	Do not exceed 12 fl or Do not apply more that		er acre per season. opiconazole per acre per season.
PARSLEY Fresh and Dried Leaves CILANTRO (Corian- der), Leaves	Leaf Spot (Cercospora spp.) Leaf Spot (Alternaria spp.) Powdery Mildew (Erysiphe spp.)	3-4 fl oz	Begin applications at first sign of disease and repeat on a 14 day interval. Make no more than 2 consecutive applications before rotating to another registered fungicide with a different mode of action. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action. Applications are most effective when applied and allowed to dry before a rainfall. Use sufficien-t water volume to provide thorough coverage. Bumper ES can be applied by air, ground, or chemigation equipment.
		an 0.45 lb a.i. prop	re per season of Bumper ES. piconazole per acre per season.
PEANUTS	Late leaf spot (Cer- cosporidium person- atum) Early leaf spot (Cer- cospora arachidola) Rust (Puccinia arachidis) Web Blotch (Phoma arachidicola)	2.5-4 fl oz	Use 2.5-4 fl oz on Early leaf spot and use 4 fl oz on all other listed diseases. Apply the specified dosage of Bumper ES alone using ground, aerial, or chemigation equipment beginning applications 35 to 40 days after planting or at the first appearance of disease. Continue applications on a 10 to 14 day schedule. Under heavy disease pressure, use higher application rates. Bumper ES also may be used in State Agricultural Extension advisory (disease forecasting) programs which specify application timing based on environmental factors favorable for disease development.
	Southern Stem Rot (Sclerotium rolfsii)	See APPLICATION INSTRUC-TIONS section for appropriate rate	Apply 8 Imper ES at the specified rate according to one of the following schedules: A. Apply 4 fl oz of Bumper ES per acre to the crown and pegging zones of the plant using chemigation or directed ground application. Begin applications 45 days after planting or at the first appearance of disease, and repeat on a 14 day schedule. B. Apply 8 fl oz of Bumper ES per acre to the crown and pegging zones of the plant using chemigation or directed ground application. Make 2 applications; the first at pegging (approximately 60 days after planting) or at the first appearance of disease, and the second application 3 to 4 weeks later. Irrigation: When applying Bumper ES in irrigation water for Southern Stem Rot Control, use a minimum of 0.25 to 0.5 inch of irrigation water per acre. Use enough water so that the fungicide penetrates the peanut canopy and reaches the crown of the plant where Sclerotium rolfsii is most active. When using Bumper ES wi irrigation or directed ground application, additional methods should be used for leaf spot control.
	Do not apply within 14 d	eated fields to lives lays of harvest whe	ES per acre per season. tock if the high rate was used. an using no more than 4 fl oz per acre and within 21 days of harvest if using 8 fl oz per acre. nazole per acre per season.

CROP	PESTS CONTROLLED	RATE OF APPLICATION PER ACRE	APPLICATION INSTRUCTIONS	
PECANS	Pecan Scab Cladosporium caryi- genum) Downy Spot (Mycosphaerella caryigena) Liver Spot (Gnomonia caryae pv pecanae) Vein Spot (Gnomomia nerviseda) Zonate Leaf Spot (Cirstulariella moricola) Powdery Mildew (Microsphaera peni- cillata)		Pecan scab: Apply 4-8 fl oz per acre on a 14 day schedule during bud break and pre-pollination sprays. Apply 6-8 fl oz per acre during nut formation and cover sprays. Use higher rates when disease pressure is heavier. Other listed foliar diseases: Apply 4 fl oz per acre with other registered pecan products labeled for these mid to later season foliar diseases. Observe all directions, precautions, and limitations for the other products. Bumper ES may be applied by either ground or by aerial application in a minimum of 20 gal per acre. Propiconazole may have effects on federally listed threatened and endangered species or critical habitat in some counties. When using this product, you must follow the measures contained in the County Bulletin for the county in which you are making the pesticide application. To determine whether your county has a bulletin, consult https://www.epa.gov/espp/usa-map.htm . Bulletins may also be available from local pesticide dealers, extension offices, or state pesticide agencies.	
	 Do not apply more than 32 fl oz of Bumper ES per acre per season. Do not apply after shuck split. Do not apply more than 0.9 lb a.i. of propiconazole per acre per season. Do not graze livestock in treated areas or cut treated cover crop for feed. 			
PINEAPPLE (Hawaii only)	Butt rot disease of pineapple (Ceratocystis paradoxa)	per 100 gals of	Treatments can be made in either a cold or hot water dip. Cold Water Dip-Immerse crowns to give thorough wetting, remove, and allow to drain. Hot Water Dip-Maintain water temperature at 125°F (52°C). Soak crowns for 20 to 30 minutes, remove, and allow to drain.	
Do not use treated Do not graze while Do not graze tops u Dispose of used di		lant is growing. til fruit is harvest		
PISTACHIOS	Botrysphaeria Panicle and Shoot Blight (Botryosphaeria doth- idea)	5-8 fl oz	Begin applications when green leaf tissue becomes visible and continue on a 14 to 21 day interval. Under severe disease conditions, use the higher rate and the shorter interval. Under certain conditions Bumper ES applications may cause smaller and/or greener leaves. Yields of pistachios displaying these characteristics have not been reduced due to Bumper ES treatments. Bumper ES may be applied by either ground or by aerial application in a minimum of 15 gal per acre.	
		0 days of harvest an 0.90 lb a.i. pro		

	PESTS	RATE OF APPLICATION	
CROP	CONTROLLED	PER ACRE	APPLICATION INSTRUCTIONS
RICE	Sheath blight (Rhizocto- nia solan) Brown leaf spot (Helminthosporium oryzae) Narrow brown leaf spot and brown blotch (Cer- cospora oryzae) Leaf smut (Entyloma oryzae) Sheath spot (Rhizocto- nia oryzae) Kernel smut (Tilletia barclayana) Aggregate sheath spot (Rhizoctonia oryzae- sativa) Black sheath rot (Gaeu- mannomyces graminis) Stem rot suppression (Sclerotium oryzae) False smut suppression (Ustilaginoida virens)	See APPLICATION INSTRUC- TIONS section for appropriate rate	The timing of Bumper ES application will depend on disease severity, disease complex, and rice variety and growth stage. Apply Bumper ES at specified rates on either of the following schedules as an aerial spray in 5 to 10 gals of water per acre: A. 6 fl oz per acre at first internode elongation (up to 2 - inch panicle) and repeat at swollen boot. Make the second application 10 to 14 days after the first application but before the boot splits and head emerges. Bumper ES provides best control of sheath blight when the first application is applied at disease appearance in the field. Make the first application when 5% or fewer of the tillers are infected. B. 10 fl oz per acre at first internode elongation (up to 2 - inch panicle). Use the 10 oz rate if greater than 10% of the tillers are infected with sheath blight. If disease reappears, use another registered fungicide for the second application. C. Apply 6 fl oz per acre in a tank mix with Quadris® or other fungicides for control of diseases of rice.
WILD RICE (MN only)			azole may have effects on federally listed threatened and endangered species or critical his product, you must follow the measures contained in the County Bulletin for the county in licitation. To determine whether your county has a bulletin, consult Bulletins may also be available from local pesticide dealers, extension offices, or state pestid or chemigation equipment. Only aerial application is allowed. rice. ricel farming of crayfish will be practiced. elds into ponds used for commercial fish farming. Ifields to irrigate other crops. per ES per acre per season.
SORGHUM	 Do not apply within 30 Do not apply within 2 Do not graze livestocl Do not apply more that 	O days of harvest 1 days of harvest k or cut for green an 8 fl oz of Bump	

CROP	PESTS CONTROLLED	RATE OF APPLICATION PER ACRE	APPLICATION INSTRUCTIONS		
SOYBEANS	Aerial Web Blight (Rhizoctonia solani) Anthracnose (Col- letotrichum trunca- tum) Brown Spot (Septoria glycines) Frogeye Leaf Spot (Cercospora sojina) Soybean Rust (Phakopsora pachyrhizi)	4-6 fl oz	Applications may be made using ground or aerial application equipment. Use dilution rates found in the APPLICATION INSTRUCTIONS section of this label. When applying by air, add an oil-based additive for improved coverage and penetration. Apply 5-6 fl oz at the first appearance of Aerial web blight and repeat the application 14 to 21 days later. Under severe conditions, use the higher rate and shorter interval. For control of other foliar diseases, apply 6 fl oz at growth stage R3 (early pod set) when pods are 1/8 to ½ inch long and 21 days later at growth stage R5 (pod fill). Apply 4-6 fl oz at first indication that soybean rust is in the area. For best control, preventative applications work best. Repeat on a 14 to 21 day interval using the higher rate and shorter interval when disease is present in field and incidence is less than 2% (2 plants in 100 infected). If incidence is greater than this or if disease is in mid canopy, control will not be acceptable. Scouting for rust and/or being aware of the proximity of the disease via monitoring systems will aid in the proper timing to maximize the effectiveness of the fungicide applications. On certain varieties, Bumper applications may cause crinkled or smaller greener leaves. Yields of dry beans displaying these characteristics have not been reduced due to propiconazole treatments.		
	Applications may be r	Do not apply more than 12 fl oz of Bumper ES per acre per season. Applications may be made up to growth stage R6. Do not apply more than 0.34 lb a.i. propiconazole per acre per season.			
STONE FRUIT: Apricots, Cherries (sweet and Tart), Nectarines, Peaches, Plums, Plumcots, Prunes, and cultivars and or hybrids of these	Brown Rot Blossom Blight (<i>Monilinia</i> spp.)	4 fl oz	Apply by ground or air in a minimum of 15 gal per acre at early bloom stage. Stone fruit diseases are most effectively controlled by ground applications. If disease pressure is low, a second application may be made as needed up through petal fall. Make a second application if disease pressure is high or for susceptible varieties at 75-100% bloom. If blossoming is prolonged or conditions favorable for disease persist, make a third application at petal fall.		
	Powdery Mildew (Podosphaera spp.) Cherry Leafspot (Blumeriella jaapii) Rust (Tranzschelia discolor)	4 fl oz	Follow the brown rot blossom blight schedule above applying by ground or air in a minimum of 15 gal per acre. Stone fruit diseases are most effectively controlled by ground applications. Make up to 2 additional applications on a 10 to 14 day interval from the end of petal fall to harvest.		
	Fruit Brown Rot (<i>Monilinia</i> spp.)	4 fl oz	Apply by ground or air in a minimum of 15 gal per acre as needed with a maximum of 2 sprays during the preharvest period up to the day of harvest (0 day PHI). Stone fruit diseases are most effectively controlled by ground applications. If high inoculum and severe disease conditions persist, apply another registered fungicide after the two Bumper ES applications.		
	Bumper ES may be applied on the day of harvest. Do not apply more than 0.56 (b a.i. propiconazole per acre per season. Do not apply more than 20 fl oz of Bumper ES per acre per season. Applications of Bumper ES during bloom to Stanley plums have occasionally caused fruit to be less oval in shape and smaller i at harvest. To avoid this, do not apply Bumper ES to Stanley plums earlier than 21 days before harvest.				

	PESTS	RATE OF APPLICATION				
CROP	CONTROLLED	PER ACRE	APPLICATION INSTRUCTIONS			
STRAWBERRIES AND OTHER LOW GROWING BERRIES Additional Low Growing Berries: Bearberry, Bilberry, Cloudberry, Muntries, Par- tridgeberry	Anthracnose (Colletotrichum acutatum) Leaf Spot (Cercospora fragariae) Powdery Mildew (Sphaerotheca macularis) Leaf Rust (Phragmidium potentillae)	4 fl oz	Begin applications when disease levels are no more than 5%. Apply up to 4 times on a 7 day interval. Make no more than 2 consecutive applications before rotating to another registered fungicide with a different mode of action. Bumper ES may be applied by either ground in a minimum of 20 gal per acre or aerial in a minimum of 15 gal per acre.			
	Bumper ES may be ap Do not apply more that	 Do not apply more than 16 fl oz of Bumper ES per acre per season. Bumper ES may be applied on the day of harvest. Do not apply more than 0.45 lb a.i. propiconazole per acre per season. 				
SUGAR BEETS	Leaf Spot (<i>Cercospora</i> beticola) Powdery Mildew (<i>Erysiphe polygoni</i>)	4 fl oz	Begin applications at first sign of disease and repeat at 10 to 14 day intervals. Make no more than 2 consecutive applications before rotating to another registered fungicide with a different mode of action. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action. Bumper ES may be applied by air, ground, or chemigation equipment. Use dilution rates found in the APPLICATION INSTRUCTIONS section of this label.			
	 Do not apply more than 12 fl oz of Bumper ES per acre per season. Do not apply within 21 days of harvest. Do not apply more than 0.34 lb a.i. propiconazole per acre per season. 					
SUGARCANE	Pineapple disease (Ceratocystis para- doxa)		Apply Bumper ES to cut seed pieces. Treatments can be applied in either a cold or hot water dip. Cold Water Dip-Immerse seed pieces to give thorough wetting, remove, and allow to drain. Hot Water Dip-Maintain water temperature at 125°F (52°C). Soak the seed pieces for 20 to 30 minutes, remove, and allow to drain. Conveyor Belt Treatment-Treat seed pieces with Bumper/water solution using in-line directed spray sufficient to wet cut ends.			
	Do not use treated se Dispose of spent dip		d or feed purposes. g to state and federal regulations.			
TREE NUTS Almond (see specific directions in ALMOND Section) Beechnut Brazil Nut Butternut Cashew Chestnut	Foliar Diseases	4-8 fl oz	Apply Bumper ES at first sign of disease. Repeat on a 7 to 14 days interval. Bumper ES may be applied by either ground or aerial application in a minimum of 15 gal per acre. Tree nut diseases are most effectively controlled by ground applications.			
Chinquapin Filbert (see specific directions in FIL- BERT section) Hickory Macadamia Pecan (see specific directions in PECAN section) Walnut Pistachios (see specific directions in PISTACHIO sec- tion)	• Do not apply more than 0	ys of harvest excep 1.90 lb a.i. propicona	t for pecan (see specific directions in PECAN section of this label).			

CROP	PESTS CONTROLLED	RATE OF APPLICATION PER 100 GALLONS	APPLICATION INSTRUCTIONS
Pineapple	Ceratocytis Butt Rot (Ceratocystis paradoxa)		Apply Bumper ES at 3 to 4 fluid ounces in 100 gallons of water or wax water emulsion after harvest. Fruit should be dipped or sprayed for thorough coverage and allowed to drain. Limit dipping time to no more than 3 minutes. Dip solution should be replaced with fresh dip solution after 200,000 lbs of fruit have been treated. Fruit discarded from fresh fruit operations may be used for processing. Cannery wastes may be fed.
	Do not apply more that	n 4 fl oz of Bumper ES as	a post harvest treatment.

FL OZ OF BUMPER ES PER ACRE	LB A.I. PER ACRE	ACRES TREATED PER 1 GALLON OF BUMPER ES	
2	0.056	64.0	
4	0.1125	32.0	
6	0.169	21.3	
8	0.225	16.0	
10	0.28	12.8	
12	0.34	10.7	
16	0.45	8.0	
20	0.56	6.4	
24	0.67	5.3	
30	0.84	4.3	
32	0.90	4 0	

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have

dried.

INFORMATION FOR TURFGRASS AND ORNAMENTAL USES

Bumper ES is a systemic fungicide for use on turfgrasses for the control of dollar spot (Sclerotinia homoeocarpa), brown patch (Rhizoctonia solani), anthracnose (Colletotrichum graminicola), red thread (Laetisaria fuciformis), pink patch (Limonomyces roseipellis), rust (Puccinia graminis), powdery mildew (Erysiphe graminis), stripe smut (Ustilago striiformis and Urocystis agropyri), summer patch (Magnaporthe poae), necrotic ring spot (Leptosphaeria korrae), spring dead spot (Leptosphaeria korrae, Leptosphaeria narmari, Ophiosphaerella herpotricha, Gaeumannomyces graminis), take-all patch (Gaeumannomyces graminis), leafspot (Bipolaris spp., Drechslera spp.), gray leafspot (Pyricularia grisea), pink snowmold (Microdochium nivale), Fusarium patch (Fusarium nivale), gray snowmold (Typhula spp.), yellow patch (Rhizoctonia cerealis), and zoysia patch (Rhizoctonia solani).

Bumper ES also controls numerous diseases on ornamentals and other landscape and nursery plantings. It controls powdery mildews, rusts, leafspots, scabs, and blights. Refer to the appropriate section for specified diseases and plants.

For turfgrass and ornamental uses, do not apply this product through any type of irrigation system. Do not use Bumper ES in greenhouses or as a tree injection. Do not apply more than 5.8 fl oz per 1000 sq ft of Bumper ES per calendar year.

MIXING INSTRUCTIONS

Fill the spray tank 1/2 to 3/4 full with water. Add the proper amount of Bumper ES and then add the rest of the water. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

If Bumper ES is tank mixed with other products, use the following sequence:

- Always check the compatibility of the tank mix using a jar test with proportionate amounts of Bumper ES, other chemicals to be used, and the water, before mixing in the spray tank.
- 2. Provide sufficient jet or mechanical agitation during filling and application to keep the tank mix uniformly suspended.
- 3. Fill tank at least 1/2 full of clean water.
- 4. Add wettable powders to the tank first, allowing them to completely suspend in the tank before proceeding. This process can be hastened by premixing the product in water before adding to the tank.
- 5. Add flowables or suspensions next.
- 6. Add Bumper ES next.
- 7. Add emulsifiable concentrates last.
- 8. Do not leave tank mix combinations in the spray tank for prolonged periods without agitation. Mix and apply them the same day.

TANK MIXES

For broader spectrum control, Bumper ES can be tank mixed with other fungicides. For example, Subdue Maxx* may be tank mixed with Bumper ES or used alone when conditions are favorable for Pythium blight. Bumper ES is also compatible with numerous herbicides and insecticides. Check compatibility before tank mixing. Add Unite* (3 pts per 100 gals) to tank mixes which are incompatible. Follow the directions under MIXING INSTRUCTIONS section of this label for tank mixes. Observe all directions, precautions, and limitations on labeling of all products used in tank mixes. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are registered.

TUREGRASS AND DICHONDRA DISEASE CONTROL

- USE BUMPER ES IN A PREVENTIVE DISEASE CONTROL PROGRAM.
- . Apply in sufficient water to ensure thorough coverage.
- Apply after mowing OR allow sprayed area to completely dry before mowing.
- For control of foliar diseases, allow sprayed area to completely dry before irrigation.
- For control of soil-borne diseases, Bumper ES can be watered in after application.
- Under conditions optimum for high disease pressure, use the higher rate and the shorter interval.
- For optimum turf quality and disease control, use Bumper ES in conjunction with turf management practices that promote good plant health and optimum disease control
- · Evaluate spray additives prior to use. Label directions are based on data

- obtained with no additives.
- Before use of any fungicide, proper diagnosis of the organism causing the disease is important. Use of diagnostic kits or other means of identification of the disease organism is essential to determine the best control meas-
- Do not apply more than 5.8 fl oz per 1,000 sq ft per calendar year nor apply more than 1.79 lb a.i. per acre per application.
- Do not graze animals on treated areas. Do not feed clippings from treated areas to livestock or poultry.
- Bermudagrass can be sensitive to Bumper ES. Do not exceed 1.44 fl oz per 1,000 sq ft every 30 days on any variety of bermudagrass. In Florida, do not apply Bumper ES to bermudagrass golf course greens when temperatures exceed 90°F.

TURFGRASS-Specific Diseases, Rates, and Application Timing

DISEASE	FL OZ PER 1,000 SQ FT	FL OZ PER ACRE	APPLICATION INTERVAL/ TIMING	INSTRUCTIONS
Dollar Spot	0.18	8.0	7 days	Apply when conditions are favorable for disease development.
(Sclerotinia homoeo- carpa)	0.18	8.0	14 days	Tank mix with low label rate of one of the following fungicides: Daconil Weatherstik®, Daconil Ultrex®
	0.37	16	21-28 days	Tank mix with low label rate of one of the following fungicides: Daconil Weatherstik, Daconil Ultrex, Chipco® 26019
	0.37 -0.73	16-32	14-28 days	If using the 0.37-0.73 fl oz per 1,000 sq ft rate without tank mixing, make no more than 3 consecutive applications for dollar spot control before rotating to an alternate EPA-registered fungicide having a different mode of action.
Anthracnose (Colletotrichum graminicola)	0.37-0.73	16-32	14-28 days	Apply when conditions are favorable for disease development. When disease pressure is high, use higher rates of Bumper ES and shorter intervals. For broad spectrum control, tank mix with a registered contact fungicide at the label rate. If disease is present, mix 0.73 floz of Bumper ES per 1,000 sq ft with the label rate of the above mentioned contact fungicides.
Brown Patch (Rhizoctonia solani)	0.37-0.73	16-32	14-21 days	Begin applications in May or June before disease is present. Tank mix with a registered contact fungicide labeled for brown patch control at the label rate. Under conditions of high temperatures and high humidity, use the higher rates of Bumper ES and shorter intervals.
Powdery Mildew (Erysiphe graminis), Rust (Puccinia graminis)	0.37-0.73	16-32	14-28 days	Apply when conditions are favorable for disease development. If disease is present, use 0.73 fl oz of Bumper ES per 1,000 sq ft
Red Thread (Laetisaria fuciformis), Pink Patch (Limonomyces roseipellis)	0.37	32	14-21 days	Apply when conditions are favorable for disease development.
Stripe Smut (Ustilago striiformis) (Urocystis agropyri)	0.37-0.73	16-32	Fall or Spring	Apply once in the fall after grass becomes dormant or in the early spring before grass starts to grow.
Gray Leafspot (Pyricylaria grisea)	0.37-0.73	16-32	14 days	Apply when conditions are favorable for disease development. If using the .037 fl oz per 1,000 sq ft rate, tank mix with a registered contact fungicide at the label rate.
Melting out, Leaf Spot (Bipolaris spp.) (Drechslera spp.)	0.37-0.73	16-63	14 days	Under light to moderate pressure, apply Bumper ES to reduce the severity of leaf spot and melting out. For broad spectrum disease control, tank mix the 0.37 fl oz Bumper ES rate with a registered contact fungicide at the label rate. Tank mix the 0.37-0.73 fl oz per 1,000 sq ft Bumper ES rate with a registered contact fungicide at the label rate.

DISEASE Summer Patch. Poa	FL OZ PER 1,000 SQ FT	FL OZ PER ACRE	APPLICATION INTERVAL/ TIMING 14 days	INSTRUCTIONS Apply Bumper ES beginning in April. Use the 1.45 fl oz per 1,000 sg ft rate on a 28 day
Patch (Magnaporthe poae)	1.45	63	28 days	schedule and the 0.73 fl oz per 1,000 sq ft rate on a 14 day schedule.
Take-All Patch (Gaeumannomyces graminis)	0.73-1.45	32-63	Spring and Fall	Apply Bumper ES to reduce the severity of take-all patch. Make 1 to 2 fall applications in September and October or when night temperatures drop to 55°F, and 1 to 2 spring applications in April and May, depending on local instructions.
Spring Dead Spot (Leptosphaeria korrae, Leptosphaeria nar- mari, Ophiosphaerella herpotricha, Gaeu- mannomyces graminis)	1.45	63	30 days	Make 1 to 3 applications For one application, apply in September or October. For multiple applications, begin sprays in August.
Necrotic Ring Spot (Leptosphaeria korrae)	1.45	63	Fall or Spring	Apply in the fall and/or the early spring depending on local instructions.
Snowmold, Gray (Typhula spp.) Pink (Microdochium nivale)	0.73-1.45	32-63	Late Fall	Apply one application in the late fall before snow cover. Do not apply on top of snow. For optimum disease control, the 0.73-1.45 fl oz Bumper ES rate should be tank mixed with either PCNB or chlorothalonil at label rates.
Fusarium Patch (Fusarium nivale)	0.73-1.45	32-63	Fall-Early Spring	Apply when conditions are favorable for disease development.
Yellow Patch (Rhizoctonia cerealis)	1.10-1.45	48-63	Late Fall	Apply one application in the late fall before snow cover. Do not apply on top of snow. If using a 1.10 fl oz per 1,000 sq ft rate, tank mix with a registered contact fungicide at the label rate.
Zoysia Patch, large patch of zoysia (<i>Rhi-</i> zoctonia solani)	1.10-1.45	48-63	Early Fall	Make one application in the early fall (mid-September to mid-October) prior to development of disease symptoms. Consult local turfgrass extension experts to determine the optimum application timing for your area.

DICHONDRA-Specific Disease, Rates, and Application Timing

DISEASE	FL OZ PER 1,000 SQ FT		APPLICATION INTERVAL/ TIMING	INSTRUCTIONS
Dichondra Rust (Puc- cinia dichondrae)	0.73	32	14-21 days	Apply when conditions are favorable for disease development.

Establishment of Cool Season Turfgrass

Bumper ES provides control of many diseases of turf, and its primary use is as a fungicide for use against the diseases listed on this label. As an additional benefit, Bumper ES will improve the rate of establishment when it is applied to cool season grass seedlings or sod.

New Seedlings: Apply 0.35 fl oz per 1,000 sq ft at the 2- to 3-leaf stage of growth for faster root development and top growth.

Sod: Apply 0.35 fl oz per 1,000 sq ft 2 to 6 weeks before cutting for increased sod knitting and faster establishment after laying.

DISEASE CONTROL IN NURSERIES (FIELD) AND LANDSCAPE PLANTINGS

- USE BUMPER ES IN A PREVENTIVE DISEASE CONTROL PROGRAM.
- To determine the use directions for controlling a disease on an ornamental plant species, select the plant species in Table 1. The number in parentheses following the plant species refers you to the disease(s) controlled in Table 2. Find the disease in Table 2. The letter in brackets following the disease refers you to the application regime in Table 3.
- . Allow spray to dry before overhead irrigation is applied.
- Optimum benefit of Bumper ES is obtained when used in conjunction with sound disease management practices.

Instructions

Bumper ES may be used at rates of 0.75-8.7 fl oz per 100 gals of water for control of diseases of ornamental plant species (see Tables 1, 2, and 3.)

For outdoor uses, you can apply up to 2.0 gals of Bumper ES per acre per crop per calendar year.

For general disease control in landscapes, apply 2.2-3.0 fl oz per 100 gals of water every 21 days. For best control, begin Bumper ES applications before disease development.

Plant tolerances to Bumper ES have been found acceptable for the specific genera and species of plants listed under the **DIRECTIONS FOR USE**. Other plant species may be sensitive to Bumper ES and diseases other than those listed may not be controlled. Before using Bumper ES on plants or for diseases that are not listed in the **DIRECTIONS FOR USE**, test Bumper ES on a small-scale basis first. Do not apply Bumper ES to African violets, begonias, Boston fern, or geraniums. Apply the specified rates for a particular type of disease, i.e., rust, powdery mildew, etc., and evaluate for phytotoxicity and disease control prior to widespread use.

Table 1. Ornamentals-Plant Species

Numbers in parentheses refer to diseases controlled. See Table 2.

Herhaceous Ornamentals

(Nurseries and Landscape Plantings)

Calendula (4a)
Carnation (5f)
Chrysanthemum (2a)
Delphinium (4a)

English Ivy (3e) Gomphrena (3a) Impatiens (3a, 3b, 4a)

Iris (5d)
Marigold (3a)
Monarda (4c)

Phlox (4c) Snapdragon (5d)

Sweet William (3k) (Dianthus barbatus)

Zinnia (4c)

Woody Ornamentals

Amelanchier (4d) Ash (4c)

Azalea (2c, 4b) Bayberry (3n) Camellia (3e)

Cotoneaster (3i)

Crabapple (3c, 3q, 4c, 5a)

Crape Myrtle (4a) Dogwood (3h, 4c) Douglas Fir (5b)

Elm (4c)

Euonymus (3e, 4c) Hawthorn (5a)

Holly (3r) Juniper (1a) Lilac (4c)

Lilac (4c) Linden (3e, 3b, 4b)

Magnolia (3e, 4b) Maple (3e, 4f)

Oaks (3p) Pines (1b, 1c) Poplars (5b)

Pyracantha (3o) Red Tip Photinia (3i)

Rhaphiolepsis (3e, 3i) Rhododendron (2c, 3n)

Roses (3g, 4e, 5c) (Outdoor Use Only)

Shasta Fir (5e) Sweetgum (3b, 3c, 3n) Sycamore (3e) Tulip Tree (3e, 4a) Wax Myrtle (3n)

Nonbearing Fruits and Nuts

Apple (3q, 4d, 5a) Batlett Pear (3q, 4c, 5a)

Cherry (2b, 3d) Citrus (3m) Nectarine (2b)

Peach (2b) Pecan (3b, 3c, 3f, 3l, 3n, 4e)

Plum (2b) Walnut (3i)

Table 2. Diseases

Letters in brackets refer to application regimes. See Table 3.

- 1. Conifer Blights
 - a. Phomopsis juniperovora (Phomopsis Blight) [B]
 - b. Sirrococcus strobolinus (Tip Blight) [D]
 - c. Sphaeropsis sapinea (Diplodia Tip Blight) [B]
- 2. Flower Blight
 - a. Ascochyta chrysanthemi (Ray Blight) [C]
 - b. Monilinia spp. [A]
 - c. Ovulinia spp. [B]
- 3. Leaf Blights/Spots
 - a. Alternaria spp. [B]
 - b. Cercospora spp. (Brown Leaf Spot) [C]
 - c. Cladosporium spp.(Scab) [C]
 - d. Coccomyces hiemalis [A]
 - e. Colletotrichum spp. [B]
 - f. Cristulariella spp. (Zonate leafspot) [C]
 - g. Diplocarpon rosae (Blackspot) [B]
 - h. Discula spp. (Anthracnose) [A]
 - i. Fabraea maculata (syn. Entomosporium maculata) [B]
 - j. Gnomonia leptostyla (Anthracnose) [C]
 - k. Heterosporium echinulatum [B]
 - I. Mycosphaerella carvigena (Downy Spot) [C]
 - m. Mycosphaerella fructicola (Greasy Spot) [E]
 - n. Septoria spp. (Leaf Scorch) [C]
 - o. Spilocaea pyracanthae [B]
 - p. Tubakia drvina [D]
 - p. iubakia uryilla [D]
 - q. Venturia inaequalis (Scab) [A]
 - r. Rhizoctonia web blight [B]
- 4. Powdery Mildew
 - a. Erysiphe spp. [B]
 - b. Microsphaera spp. [C]
 - c. Oidium spp. [B]
 - d. Podosphaera spp. [B]
 - e. Sphaerotheca pannosa [B]
 - f. Phyllactinia spp. [B]
- 5. Rust
 - a. Gymnosporangium juniperi-virginianae [A]
 - b. Melampsora occidentalis [D]
 - c. Phragmidium spp. [B]
 - d. Puccinia spp. [B]
 - e. Pucciniastrum goeppertianum [D]
 - f. Uromyces dianthi (B)

Table 3. Application Regimes

- [A] Mix 0.75-1.5 fl oz of Bumper ES in 100 gals of water and apply as a full coverage spray to the point of drip. Apply every 14-21 days during the period of primary infection. If disease is present, tank mix with an EPA-registered contact fungicide. For flower blight, apply Bumper ES when there is 5-10% bloom and again at 70-100% bloom. For dogwoods, apply the 0.75-1.5 fl oz rate every 14 days, or apply 3 fl oz of Bumper 41 VC every 28 days.
- [B] Mix 1.8-3.0 fl oz of Bumper ES in 100 gals of water and apply as a full coverage spray to the point of drip. Apply as needed, beginning when conditions are favorable for disease development. For blackspot, apply with a registered contact fungicide labeled for black spot. For Calendula, apply every 30 days. For diplodia tip blight, make 3 applications every 14 days prior to major period of infection. For juniper phomopsis blight.

- make first application as soon as junipers start to grow, and repeat the applications every 14-21 days during periods of active growth.
- [C] Mix 3-4.5 fl oz of Bumper ES in 100 gals of water and apply as a full coverage spray to the point of drip. Apply every 30 days beginning when conditions are favorable for disease development. For pecans, apply the 4.5 fl oz rate beginning at bud break. Apply 3 times on 14-day intervals. For walnut, apply 3 fl oz at 14- to 21-day intervals. For ray blight, apply 4.5 fl oz at 7-day intervals or 7.5 fl oz at 14-day intervals. For impatiens, bayberry, linden, magnolia, sweetgum and wax myrtle, the maximum use rate is 8 fl oz
- [D] Mix 6 fl oz of Bumper ES in 100 gals of water and apply as a full coverage spray to the point of drip. Apply every 14-28 days, beginning when conditions are favorable for disease development. For Douglas fir needle rust, apply once in May. For tip blight, initiate applications in mid-late winter, and apply 3 times at 2-month intervals.
- [E] Mix 7.5-8.7 fl oz of Bumper ES in 100 gals of water and apply as a full coverage spray to the point of drip. Apply during June to August time period.

Do not apply to apple, Bartlett pear, cherry, citrus, nectarine, peach, pecan, plum, or walnut trees that will bear harvestable fruit within 12 months.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in the original container in a cool and secure place.

PESTICIDE DISPOSAL: Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used 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 in proper disposal methods.

CONTAINER HANDLING:

Nonrefillable Container (five gallons or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ 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.

Nonrefillable Container (greater than five gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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.

STORAGE AND DISPOSAL (cont.)

Refillable Container (greater than 55 gallons): Refillable container. Refill this container with propiconazole only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. For final disposal, offer for recycling or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unoppened product container at once.

By using this product, user or buyer accepts the following CONDITIONS, DIS-CLAIMER OF WARRANTIES and LIMITATIONS OF LIABILITY.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks 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 the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. To the extent consistent with applicable law, all such risks shall be assumed by the user or buver.

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