

66222-42

07/14/2003

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## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Mr. Andy Eimanis  
Makhteshim Agan of North America, Inc.  
551 Fifth Ave., Suite 1100  
New York, NY 10176

JUL 14 2003

SUBJECT: Bumper 41.8 EC  
EPA Registration Number 66222-42  
Your amendment dated April 14, 2003

Dear Mr. Eimanis:

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended, is acceptable provided that the following changes are made:

1. Remove the phrase "For terrestrial uses," from the Environmental Hazards section. This phrase is only needed when the label contains aquatic uses as well as terrestrial uses.
2. On page 8, in the line beginning with "Pecan Scab-South (AL, AR...)", delete the second "MS" within the parenthesis.
3. In the Agricultural Use Requirement Box, delete the statement "Exception: If the product is soil injected or soil incorporated, the worker..." as it does not appear to be appropriate for this product and is not on the labels of other substantially similar products.

Submit one copy of your final printed label before you release the product for shipment. If you have any questions please contact Michael Nieves of my staff by phone at (703) 308-6351 or by email at [nieves.michael@epa.gov](mailto:nieves.michael@epa.gov).

Sincerely,

A handwritten signature in cursive script, appearing to read "Mary L. Waller".

Mary L. Waller  
Product Manager (21)  
Fungicide Branch  
Registration Division

Enclosure

# BUMPER® 41.8 EC

(PROPICONAZOLE) FUNGICIDE

ACTIVE INGREDIENT:	% BY WT.
Propiconazole: 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]Methyl]-1H-1,2,4-triazole.....	41.8%
INERT INGREDIENTS:.....	58.2%
<b>TOTAL</b>	<b>100.0%</b>

## KEEP OUT OF REACH OF CHILDREN WARNING-AVISO

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

### FIRST AID

- |                                |  |
|--------------------------------|--|
| <b>IF IN EYES:</b>             | <ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>               |
| <b>IF ON SKIN OR CLOTHING:</b> | <ul style="list-style-type: none"> <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>   |
| <b>IF SWALLOWED:</b>           | <ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not give any liquid to the person.</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> |
| <b>IF INHALED:</b>             | <ul style="list-style-type: none"> <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>                  |

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**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. Give a saline laxative and supportive therapy. Contains petroleum distillate - vomiting may cause aspiration pneumonia.

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING-AVISO

Causes substantial but temporary eye injury. Do not get in eyes or clothing. Wear protective eyewear (goggles or face shield). This product may cause skin sensitization reactions in certain individuals. Causes eye irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed, inhaled, or absorbed through skin. Avoid breathing spray mist.

### 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 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
- Protective eyewear

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, use detergent and hot water. Keep and wash PPE separately from other laundry.

**NET WEIGHT: 2 ½ GALLONS**



## 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

### User should:

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

## 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. 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.

## 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 24 hours.** Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Protective eyewear

## GENERAL INFORMATION

Bumper 41.8 EC is a broad spectrum fungicide for the control of specified diseases in wheat, barley, rye, oats, rice, wild rice, celery, corn, peanuts, pineapple, sugarcane, grasses grown for seed, stone fruits, and nonbearing citrus.

Do not use in nurseries, on turf, on landscape plantings, or as a tree injection.

**FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THE LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, OR ILLEGAL RESIDUES.**

## SPRAY EQUIPMENT

Through coverage is necessary to provide good disease control. Applications using sufficient water volume to provide thorough and uniform coverage generally provide the most effective disease control.

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

Air-assisted or air-blast sprayers move spray droplets into the canopy using a forced air stream. 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; (1) maintain the correct rated pressure for the nozzles selected, and (2) provide sufficient agitation in tank to keep mixture in suspension. Use a jet agitator, liquid sparge tube, or mechanical paddle for agitation. Do not air sparge.

Although Bumper 41.8 EC 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

**Aerial Application:** For those crops where aerial applications are indicated, apply in a minimum of 5 gals. of water per acre, unless specified otherwise. For stone fruits and nonbearing citrus, a minimum of 5 to 10 gals. of water per acre is recommended using the higher volume on large trees. 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.

**Ground Application:** Apply Bumper 41.8 EC by ground equipment in a minimum of 10 gals. of water per acre unless specified otherwise. For stone fruits and nonbearing citrus, a minimum of 50 gals. of water per acre is recommended.

**Application Through Irrigation Systems—Apply Bumper 41.8 EC through irrigation equipment only to crops for which chemigation is specified on this label.**

Bumper 41.8 EC, alone or in combination with other pesticides, which are registered for application through irrigation systems, may be applied through irrigation 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.

**Note:** Do not inject Bumper 41.8 EC 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 41.8 EC. Bumper 41.8 EC 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.

### Operating Instructions

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick closing check-valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended.

### Center Pivot Irrigation Equipment

**Notes:** (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when chemigating Bumper 41.8 EC 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 recommended by the equipment manufacturer. When applying Bumper 41.8 EC 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 41.8 EC required to treat the area covered by the irrigation system.
- Add the required amount of Bumper 41.8 EC 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 41.8 EC 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 41.8 EC 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 41.8 EC through irrigation equipment, use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of Bumper 41.8 EC required to treat the area covered by the irrigation system.
- Add the required amount of Bumper 41.8 EC 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 41.8 EC solution has cleared the last sprinkler head.

### 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. For wheat, barley, rye, and rice, custom applicators must use a closed system for mixing and loading this product.

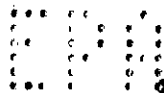
**Bumper 41.8 EC Alone:** Add  $1/2$ – $2/3$  of the required amount of water to the spray or mixing tank. With the agitator running, add the Bumper 41.8 EC to the tank. Continue agitation while adding the remainder of the water. Begin application of the spray solution after the Bumper 41.8 EC has completely dispersed into the mix water. Maintain agitation until all of the mixture has been sprayed.

**Bumper 41.8 EC + Tank Mixtures:** Bumper 41.8 EC is usually compatible with most recommended insecticides, fungicides, and foliar nutrients; however, do not mix Bumper 41.8 EC with Syllit, or crop injury may occur.

To determine the physical compatibility of Bumper 41.8 EC 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 41.8 EC to the spray tank. Allow the Bumper 41.8 EC to completely disperse. Spray the mixture with the agitator running.

If using Bumper 41.8 EC 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. No label dosage rate should be exceeded, and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product which 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.



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## ROTATIONAL CROPS

Soybeans may be planted as a double crop following a cereal crop, which has been treated with Bumper 41.8 EC. Do not use hay, forage, or fodder from the soybean crop as any component of animal feed or bedding. To avoid possible illegal residues, do not plant any other crop intended for food, grazing, or any component of animal feed or bedding within 105 days of Bumper 41.8 EC application to the preceding crop, unless the second crop appears on this label.

## CELERY

For control of early blight (*Cercospora*) and late blight (*Septoria*), apply 4 fl. oz. of Bumper 41.8 EC per acre on a 7-day schedule either by ground or aerial application. If desired, Bumper 41.8 EC may be tank-mixed with an appropriate spreader-sticker.

To avoid possible illegal residues: (1) Do not apply more than 16 fl. oz. of Bumper 41.8 EC per crop (4 applications), and (2) Do not apply during the last 14 days before harvest.

## CEREALS

### Wheat, Barley, Rye, and Oats

In wheat, barley, rye, and oats, Bumper 41.8 EC controls rusts (*Puccinia* spp.), powdery mildew (*Erysiphe* spp.), leaf blight and glume blotch (*Septoria* spp.), tan spot (*Pyrenophora tritici-repentis*), Helminthosporium leaf blight, spot blotch, barley scald (*Rhynchosporium secalis*), and net blotch (*Pyrenophora teres*). Apply 4 fl. oz. of Bumper 41.8 EC per acre by ground or aerial application or through irrigation equipment. Highest yields are normally obtained when Bumper 41.8 EC is applied to the emerging flag leaf. Bumper 41.8 EC can be applied until the ligule of the flag leaf emerges (Feekes growth stage 8). Do not apply after this growth stage to avoid possible illegal residues. Bumper 41.8 EC may be applied earlier if disease symptoms appear (especially applicable to barley).

### Wheat Only

For control of foot rot (*Pseudocercospora* spp.), apply 4 fl. oz. of Bumper 41.8 EC per acre plus half rates of other EPA-registered fungicides such as Mertect and Topsin M. Apply at tillering but before elongation has occurred. Do not apply more than 4 fl. oz. of Bumper 41.8 EC per season.

To avoid possible illegal residues: (1) Do not apply more than 4 fl. oz. of Bumper 41.8 EC per acre per season. (2) Do not apply to oats within 40 days of harvest. (3) Do not graze or feed livestock treated wheat, barley, or rye forage or cut the green crop for hay or silage. After harvest, the straw from these crops may be used for bedding or feed. (4) Bumper 41.8 EC treated oat forage may be grazed, and oat forage and hay may be fed to livestock.

### Rice

In rice, Bumper 41.8 EC controls sheath blight (*Rhizoctonia solani*), Brown leaf spot (*Helminthosporium oryzae*), narrow brown leaf spot and brown blotch (*Cercospora oryzae*), leaf smut (*Entyloma oryzae*), sheath spot (*Rhizoctonia oryzae*), and black sheath rot (*Gaeumannomyces graminis*). Bumper 41.8 EC also suppresses stem rot (*Sclerotium oryzae*) and controls kernal smut (*Tilletia barclayana*). Apply Bumper 41.8 EC on either of the following schedules as an aerial spray in 5-10 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 10-14 days after the first application but before the boot splits and head emerges. Bumper 41.8 EC provides best control of sheath blight when the first application is applied at disease appearance in the field. The first application is recommended when 5% or fewer of the tillers are infected.
- B. 10 fl. oz. per acre at first internode elongation (up to 2 - inch panicle). The 10 oz. rate is recommended if greater than 10% of the tillers are infected with sheath blight. If disease reappears, use another registered fungicide for the second application.

To avoid possible illegal residues: (1) Do not apply to stubble or ratoon crop rice; (2) Do not use in rice fields where commercial farming of crayfish will be practiced; (3) Do not drain water from treated rice fields into ponds used for commercial catfish farming; (4) Do not use water drained from treated fields to irrigate other crops; and; (5) Do not use in CA.

**Endangered Species Restrictions:** The use of Bumper 41.8 EC (propiconazole) on rice is restricted to protect the endangered fat pocketbook pearly mussel (*Potamilus capax*) and its habitat. Use is prohibited in the following areas of AR:

**Mississippi County**—Within the basin that drains directly into the Right Hand Chute of Little River, south of Big Lake National Wildlife Refuge.

**Poinsett County**—Between Crowley's Ridge and the levee east of the Right Hand Chute of Little River and the St. Francis Floodway. Use is also prohibited west of Rt. 140 and north of Rt. 63 at the siphon

near Marked Tree. Except that the prohibited area does not include the area bounded by Arkansas Highway 373 on the west, Highway 63 on the east and Highway 14 on the south.

**Cross, St. Francis, and Lee Counties**—Between Crowley's Ridge and the levee east of the Right Hand Chute of Little River, and the St. Francis Floodway, as far south as the confluence of L'Anguille River (Lee County).

#### **Wild Rice (MN only)**

For control of *Helminthosporium* leaf blight and brown spot (*Bipolaris* spp.), apply 6 fl. oz. of Bumper 41.8 EC per acre at both booting and heading, or make a single application of 8 fl. oz. per acre at booting. For aerial applications, apply in a spray volume of 5 to 10 gals. per acre.

*Do not use water drained from treated fields to irrigate other crops.*

#### **CORN**

##### **(FIELD CORN, FIELD CORN GROWN FOR SEED, SWEET CORN, AND POPCORN)**

For control of *Helminthosporium* leaf blights (*Helminthosporium maydis*, *H. turcicum*, and *H. carbonum*), rusts (*Puccinia* spp.), gray leaf spot (*Cercospora zeae-maydis*), and eye spot (*Kabatiella zeae*), apply Bumper 41.8 EC by ground or aerial application or through irrigation equipment according to the following schedule:

**Helminthosporium Leaf Blights:** Apply 2-4 fl. oz. of Bumper 41.8 EC per acre when disease first appears and continue on a 7- to 14-day schedule.

**Rusts:** Apply 4 fl. oz. of Bumper 41.8 EC per acre when rust pustules first appear and continue on a 7- to 14-day schedule.

**Gray Leaf Spot and Eye Spot:** Apply 4 fl. oz. of Bumper 41.8 EC per acre when disease first appears. If conditions favorable for disease persist, continue to apply on a 14-day schedule.

*To avoid possible illegal residues: (1) Do not apply Bumper 41.8 EC to field and field corn grown for seed after silking. (2) Do not apply more than 16 fl. oz. of Bumper 41.8 EC per acre per season. (3) Do not apply to sweet corn within 14 days of harvest. (4) Do not harvest field corn, field corn grown for seed, or popcorn for forage within 30 days of application. (5) Do not harvest sweet corn for forage within 14 days of application.*

##### **GRASSES GROWN FOR SEED (NEBRASKA, OREGON, WASHINGTON, IDAHO, AND MINNESOTA ONLY)**

Bumper 41.8 EC controls rusts (*Puccinia* spp.), powdery mildew (*Erysiphe* spp.), and *Selenophoma* stem eyespot (*Selenophoma*) in perennial ryegrass, fescues, bluegrass, orchardgrass, and/or wheatgrasses.

Mix 4-8 fl. oz. of Bumper 41.8 EC (maximum 4 fl. oz. on bluegrass) in a minimum of 20 gals. of water per acre for ground application, or in a minimum of 10 gals. of water per acre for aerial application. Bumper 41.8 EC may also be applied 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 (except on bluegrass), and make applications at 14-day intervals until the seed is mature. Do not apply more than 32 fl. oz. of Bumper 41.8 EC per acre per growing cycle. Make the last application at least 20 days before seed matures. For bluegrass, it is important to begin applications early in the growing season.

*To avoid possible illegal residues, do not: (1) feed hay cut within 20 days of the last application, or (2) graze treated areas within 140 days of the last application.*

#### **PEANUTS**

##### **Peanuts—Bumper 41.8 EC Alone for Foliar Disease Control**

**Late Leaf Spot (*Cercosporidium*)**—Apply 4 fl. oz. of Bumper 41.8 EC per acre beginning applications 35 to 40 days after planting or at the first appearance of disease. Continue applications on a 10- to 14-day schedule. Bumper 41.8 EC also may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

**Early Leaf Spot (*Cercospora*)**—Apply 2.5-4 fl. oz. of Bumper 41.8 EC per acre beginning applications 35 to 40 days after planting or at the first appearance of disease. Continue applications on a 14-day schedule. Under heavy disease pressure, use higher recommended application rates. Bumper 41.8 EC may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable to disease development.

*To avoid possible illegal residues: (1) Do not apply more than 16 fl. oz. of Bumper 41.8 EC per acre per season. (2) Do not feed green vines to livestock or graze livestock in treated area. (3) Do not apply within 14 days of harvest.*

##### **Peanuts—Bumper 41.8 EC Plus Chlorothalonil For Foliar Disease Control**

**Early and Late Leaf Spot**—Combinations of Bumper 41.8 EC with products containing chlorothalonil may be used for early and late leaf spot control. Apply 2 fl. oz. of Bumper 41.8 EC as a tank mixture with 0.75 lb. active ingredient chlorothalonil per acre. Use the following table as a guide to determine the appropriate amount of chlorothalonil to use in the tank mixture. Begin applications 35 to 40 days after planting or at the first appearance of disease and continue applications on a 10 to 14-day schedule. Bumper 41.8 EC plus chlorothalonil also may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

Use the following table as a guide to determine the amount of product needed for the recommended tank mix ratios of Bumper 41.8 EC with various chlorothalonil formulations.

*To avoid possible illegal residues: (1) Do not apply more than 16 fl. oz. of Bumper 41.8 EC per acre per season. (2) Do not apply within 14 days of harvest. (3) Do not graze livestock in treated area. (4) Do not feed hay or threshings from treated fields to livestock.*

Number of Acres to be Treated	Amount of Bumper 41.8 EC Required for Treated Area (total acres to be treated)	Amount of Chlorothalonil Required for Treated Area by Formulation Type (total acres to be treated)	
		6 lbs. a.i. per gallon	4.17 lbs. a.i. per gallon
1	2 fl. oz. (1/8 pt.)	1 pt.	1.5 pts.
5	10 fl. oz. (5/8 pt.)	5 pts.	7.5 pts.
10	1.25 pts.	10 pts.	15 pts.
50	6.25 pts.	50 pts.	75 pts.
100	12.5 pts.	100 pts.	150 pts.

#### **Peanuts—Bumper 41.8 EC Alone for Southern Stem Rot Control**

For the control of Southern Stem Rot (*Sclerotium rolfsii*), apply Bumper 41.8 EC using one of the following schedules:

- A. Apply 4 fl. oz. of Bumper 41.8 EC 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.  
*To avoid possible illegal residues: (1) Do not apply more than 16 fl. oz. of Bumper 41.8 EC per acre per season. (2) Do not feed green vines to livestock or graze livestock in treated area. (3) Do not apply within 14 days of harvest.*
- B. Apply 8 fl. oz. of Bumper 41.8 EC 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 41.8 EC in irrigation water for Southern Stem Rot Control of Peanuts, 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.

**Ground Application:** When applying Bumper 41.8 EC by ground equipment, use a minimum of 20-60 GPA directed to the crown of the plant where *Sclerotium rolfsii* is most active. For best disease control, the higher carrier volume is recommended. Canopy openers also may be used to improve fungicide placement.

**When applying Bumper 41.8 EC via irrigation or as a directed ground application, additional methods should be employed for leaf spot control.**

**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 41.8 EC needed per acre of crop when banded applications are made.

$$\frac{\text{Band Width In Inches}}{\text{Row Spacing In Inches}} \times \text{Broadcast Rate Per Acre} = \text{Amount Needed Per Acre Of Field}$$

*To avoid possible illegal residues: (1) Do not apply more than 16 fl. oz. of Bumper 41.8 EC per acre per season. (2) Do not graze livestock in treated area. (3) Do not feed hay or threshing from treated fields to livestock. (4) Do not apply within 21 days of harvest.*

#### **PECANS**

##### **Pecans (bearing)**

Apply Bumper 41.8 EC for control of pecan scab, downy spot, liver spot, vein spot, Zonate leaf spot and fungal leaf scorch in a regular spray program beginning at budbreak when young leaves are unfolding. Continue



applications while small nuts are forming, repeating at two-week intervals as needed, not exceeding 32 fl. oz. per acre per season. Do not apply after shuck-split. Do not graze livestock in treated areas or cut treated cover crops for feed.

Apply Bumper 41.8 EC at the following rates in sufficient water to obtain good coverage, using a minimum spray volume of 10 gals. per acre by air or 50 gals. per acre by ground. For ground applications, the applicator must be in a closed cab during application.

**Pecan Scab- South (AL, AR, FL, GA, KY, LA, MO, MS, NC, SC, and TN)**

Apply 4-8 fl. oz. per acre on a 14-day schedule during bud break and pre-pollination sprays. Under severe disease conditions, use the highest rate. Apply 8 fl. oz. per acre during nut formation and cover sprays.

**Pecan Scab- Southwest (AZ, NM, OK, and TX)**

Apply 4 fl. oz. per acre on a 14-day schedule during bud break and pre-pollination sprays. Apply 6 fl. oz. per acre in case bearer and cover sprays.

**Foliar Diseases:** Bumper 41.8 EC may be applied for control of mid- to late-season foliar diseases (such as Zonate leaf spot, fungal leaf scorch, vein spot, and downy spot) at 4 fl. oz. per acre with the recommended rate of Super Tin® in the cover sprays. Observe all directions, precautions, and limitations on the labeling for this product.

**Endangered Species Restrictions:** The use of any pesticide in a manner that may kill or otherwise harm an endangered or threatened species or adversely modify their habitat is a violation Federal laws. The use of this product in pecans is controlled to prevent death or harm to endangered species. Do not use Bumper 41.8EC in the following counties:

State	Counties		
Alabama	Colbert	Lauderdale	Morgan
	Greene	Limestone	Pickens
	Jackson	Madison	Sumter
	Lamar	Marshall	
Arkansas	Clark	Dallas	Sharp
	Clay	Hot Springs	St. Francis
	Cross	Randolph	
Kentucky	Ballard	Hart	Taylor
	Butler	Livingston	Warren
	Green	McCracken	
Tennessee	Bedford	Lincoln	Perry
	Decatur	Marshall	Sequatchie
	Hardin	Maury	
Missouri	Gasconade	Osage	Wayne
	Jefferson	Ripley	
	Miller	St. Louis	
Mississippi	Lowndes	Monroe	Noxubee

**Pecans (nonbearing)**

Apply 4.0-5.5 fl. oz. per acre of Bumper 41.8 EC in sufficient water to obtain good coverage for control of pecan scab, downy spot, brown leaf spot, liver spot, vein spot, Zonate leaf spot, and fungal leaf scorch. Begin applications at bud break and repeat at 2-4 week intervals as needed, not exceeding four applications per growing season. For ground applications, the applicator must be in a closed cab during application. Do not graze livestock in treated areas. Observe endangered species restrictions noted above in the bearing pecan section.

**PINEAPPLE (HAWAII ONLY)**

For control of butt rot disease of pineapple (*Ceratocystis paradoxa*), apply 0.75 fl. oz. (22 ml) of Bumper 41.8 EC per 100 gals. of water (1:17,000). 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.

*To avoid possible illegal residues: (1) Do not use treated crowns for food or feed. (2) Do not graze while plant is growing. (3) Do not graze tops until fruit is harvested. (4) Dispose of used dip solution according to local, state, and federal regulations.*

**SUGARCANE (HAWAII ONLY)**

For control of pineapple disease of sugarcane (*Ceratocystis paradoxa*), apply Bumper 41.8 EC to cut seed pieces using 0.75 fl. oz. (22 ml) per 100 gals. of water (1:17,000). Treatments can be applied in either a cold or hot

water dip. Do not use treated seed pieces for food or feed purposes. Dispose of spent dip solution according to state and federal regulations.

**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.

#### NONBEARING CITRUS

For control of greasy spot (*Mycosphaerella citri*) in nonbearing citrus, apply 6-8 fl. oz. of Bumper 41.8 EC per acre during June-August. Repeat applications as necessary every 14 days.

To avoid possible illegal residues, do not apply to citrus that will bear harvestable fruit within 12 months.

#### APRICOTS, CHERRIES, NECTARINES, PEACHES, PLUMS, AND PRUNES

Stone fruit diseases are most effectively controlled by ground application, using sufficient water volume to provide thorough and uniform coverage.

**Brown Rot Blossom Blight (*Monillinia* spp.):** Apply 4 fl. oz. of Bumper 41.8 EC per acre at early bloom stage (apricots at red bud, cherries at popcorn, peaches and nectarines at pink bud, plums and prunes at green tip). Make a second application of 4 fl. oz. per acre as needed up through petal fall. East of the Rocky Mountains or to prunes: Make a second application of 4 fl. oz. per acre at 50 to 75% bloom. If blossoming is prolonged or conditions favorable for disease persist, make a third application of 4 fl. oz. per acre at petal fall.

**Powdery Mildew (*Podosphaera* spp.) and Cherry Leafspot (*Blumeriella jaapii*):** Follow the brown rot blossom blight schedule. Make up to 2 additional applications on a 10- to 14-day interval from the end of petal fall to harvest.

**Fruit Brown Rot (*Monillinia* spp.):** Apply as needed a maximum of 2 sprays of Bumper 41.8 EC at 4 fl. oz. per acre during the preharvest period up to the day of harvest (0 day PHI).

(1) Do not apply Bumper 41.8 EC to "Stanley" type plums. (2) Do not apply more than 8 fl. oz. of Bumper 41.8 EC per acre per crop from early bloom through petal fall. (3) Do not apply more than 8 fl. oz. of Bumper 41.8 EC per acre per crop from the end of petal fall to harvest. (4) Do not apply Bumper 41.8 EC to prunes after petal fall. (5) East of the Rocky Mountains or to prunes: Do not apply more than 12 fl. oz. of Bumper 41.8 EC per acre per crop from early bloom through petal fall.

#### STORAGE AND DISPOSAL

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

**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 STORAGE:** Triple rinse container (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. Stay out of smoke from burning containers.

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. In the event of a major spill, fire, or other emergency, call INFOTRAC at 1-800-535-5053 day or night.

#### WARRANTY STATEMENT

MAKHTESHIM-AGAN OF NORTH AMERICA warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of MAKHTESHIM-AGAN OF NORTH AMERICA. In no case shall MAKHTESHIM-AGAN OF NORTH AMERICA be liable for consequential, special, or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. In addition to the foregoing, no purchaser of this product (other than an end user) shall be entitled to any reimbursement for any loss suffered as a result of any suspension or cancellation of the registration for this product by the U.S. Environmental Protection Agency. Except as expressly provided herein, MAKHTESHIM-AGAN OF NORTH AMERICA makes no warranties, guarantees, or representations of any kind, either expressed or implied, or by usage of trade, statutory or otherwise, with regard to the product sold, including, but not limited to merchantability, fitness for a particular purpose, use or eligibility of the product for any particular trade usage. The exclusive remedy of any buyer or

user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall be damages not exceeding the purchase price paid for this product or, at MAKHTESHIM-AGAN OF NORTH AMERICA's election, the replacement of this product.

® denotes registered trademark.

Bumper® is a registered trademark of Makhteshim Agan of North America, Inc.

Super Tin® is a registered trademark of Griffin Ag. Products Co., Inc.

Bumper 41.8EC (66222-42)(to EPA 4-14-03)

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated:**

**JUL 14 2003**

**Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.**

**66 222-42**