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%
TOTAL ........................................ 100.0%

Contains petroleum distillates.

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.)

EPA Reg. No. 66222-42
EPA Est. No. 34704-MS-002

Manufactured for:
Makhteshim Agan
of North America, Inc.
4515 Falls of Neuse Road
Suite 300
Raleigh, NC 27609

40194 Bumper 1qt_FC  4/1/09  8:48 AM  Page 1
**GENERAL INFORMATION**

Bumper 41.8 EC 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.

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**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. Avoid 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 a capacity to maintain 30-45 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 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.

**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.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear:

- Long-shielded 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/managing PPE. If no such interactions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**ENGINEERING CONTROLS STATEMENT**

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

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
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 water source coverage. In most situations, Bumper 41.8 EC is most effective when applied and allowed to dry before a rainfall. Avoid application under conditions when uniform coverage cannot be obtained or when rain or evaporation drift may occur. Do not apply directly to or contaminate water sources to humans or animals.

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

**Ground Application:** For tree crops, a minimum of 50 gal. of water per acre is recommended unless specified otherwise in the APPLICATION INSTRUCTIONS section of this label. For other crops, apply Bumper 41.8 EC by ground equipment in a minimum of 10 gal. of water per acre unless specified otherwise in the APPLICATION INSTRUCTIONS section of this label.

**Chemigation:** Apply Bumper 41.8 EC 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 41.8 EC at full strength or denigration of valves and seals may occur. Use a dilution rate of at least 10 parts water to 1 part Bumper 41.8 EC. Bumper 41.8 EC is corrosive to many metal seals. 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 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 a 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 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 center pivot systems which provide uniform water distribution. Do not use end guns when applying Bumper 41.8 EC through center pivot systems because of non-uniform application.

- Determine the size of the area to be treated.
- Determine the water rate 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 – 90% 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 injection 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 water rate and 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.
- Monitor 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.

**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 band when banded applications are made:

\[
\text{Band width in inches} \times \text{Bandage rate per acre} = \text{Amount needed per acre of field}
\]

**MIXING INSTRUCTIONS**

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

**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 common insecticides, fungicides, and fertilizer nutrients. However, do not mix Bumper 41.8 EC with milk, 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 appropriate proportions of the products to 1 qt. of water. Add wettable powder and water-dispersible granular products first, the liquid fertilizers, and emulsifiable concentrates last. After thorough 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 dissipate 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. Spraying can begin when the Bumper 41.8 EC has completely dispersed.

If using Bumper 41.8 EC in tank mixture, observe all directions for use, crop-safety, 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 must be followed. This product should not be mixed with any product which prohibits such mixing. Tank mix labeled for other applications of products referenced on this label are permitted only in those states in which the referenced products are registered.

\[
\text{Band width in inches} \times \text{Broadcast rate per acre} = \text{Amount needed per acre of field}
\]

Now spacing in inches
**ROTATIONAL CROPS**

 Alfalfa can be planted 75 days after the last Bumper 41.8 EC application if the trial 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 41.8 EC application to the preceding crop unless the second crop appears on this label.

**RESISTANCE MANAGEMENT**

 Bumper 41.8 EC 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:

- Bumper 41.8 EC should be used in rotation with classes of fungicides with different modes of action.
- Use Bumper 41.8 EC as part of a pest management program that includes cultural and biological control where possible.
- Bumper 41.8 EC 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**

<table>
<thead>
<tr>
<th>CROP</th>
<th>PESTS CONTROLLED</th>
<th>RATE OF APPLICATION PER ACRE</th>
<th>RECOMMENDATIONS</th>
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</thead>
<tbody>
<tr>
<td><strong>ALMONDS</strong></td>
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<tr>
<td></td>
<td>Brown Rot Blossom Blight (Moniliophthora fructicola)</td>
<td>4 – 8 fl. oz.</td>
<td>Apply Bumper 41.8 EC at least 15 gallons of spray per acre at 5 – 10% bloom and 50 – 100% bloom to control or suppress Alternaria rot. Use a minimum volume of 20 gallons of water per acre for ground application or 5 gallons of water for aerial application. Additional applications may be made at 7 to 10 day intervals. If disease conditions are severe, additional applications may be made at 7 to 10 day intervals. If conditions are favorable for disease development, additional applications may be made at 7 to 10 day intervals. If conditions are favorable for disease development, additional applications may be made at 7 to 10 day intervals.</td>
</tr>
<tr>
<td></td>
<td>Anthracnose (Colletotrichum acutatum)</td>
<td>8 fl. oz.</td>
<td>Apply Bumper 41.8 EC at least 15 gallons of spray per acre at 5 – 10% bloom and 50 – 100% bloom to control or suppress Alternaria rot. Use a minimum volume of 20 gallons of water per acre for ground application or 5 gallons of water for aerial application. Additional applications may be made at 7 to 10 day intervals. If disease conditions are severe, additional applications may be made at 7 to 10 day intervals. If conditions are favorable for disease development, additional applications may be made at 7 to 10 day intervals.</td>
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<tr>
<td><strong>BANANAS AND PLANTAINS</strong></td>
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<td></td>
<td>Black Sigatoka (Mycosphaerella musicola)</td>
<td>3 fl. oz.</td>
<td>Make applications before disease symptoms appear at or near 5 – 10% bloom. Apply recommended rate of Bumper 41.8 EC with 0.75 lb. a.i. propiconazole per acre. Begin applications when conditions favor disease development. Continue applications on a 7 to 10 day interval using the highest rate for control. If conditions are favorable for disease development, additional applications may be made at 7 to 10 day intervals.</td>
</tr>
<tr>
<td><strong>BERRIES</strong></td>
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<tr>
<td></td>
<td>Mummyberry Disease (Moniliophthora spp.)</td>
<td>6 fl. oz.</td>
<td>Make first application before green tip and repeat at 7 to 10 days. If conditions are favorable for disease development, additional applications may be made at 7 to 10 day intervals.</td>
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<tr>
<td></td>
<td>Leaf spot and Stem canker (Gleosporium abscissionis) Rust (Pucciniastrum vaccini)</td>
<td>8 fl. oz.</td>
<td>Apply when conditions favor disease development. Repeat applications on a 4 week spray interval.</td>
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<td></td>
<td>Leaf and Cane Spot (Septoria rubi)</td>
<td>8 fl. oz.</td>
<td>Apply as a delayed dormant spray after training in the spring. Repeat this application in the late spring, again at bloom, and again once flowering has begun.</td>
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<tr>
<td></td>
<td>Powdery Mildew (Microsphaera vaccinii)</td>
<td>8 fl. oz.</td>
<td>Apply at 5 – 10% bloom. Repeat this application at full bloom and on a 14 day interval while conditions are favorable for disease development.</td>
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<tr>
<td></td>
<td>Leaf Spot (Septoria sp.)</td>
<td>8 fl. oz.</td>
<td>Make first application any time prior to bloom and again after petal fall. If needed, repeat application just after harvest.</td>
</tr>
<tr>
<td></td>
<td>Colletotrichum (Moniliophthora spp.)</td>
<td>4 – 6 fl. oz.</td>
<td>Make the first application at leaf bud 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.</td>
</tr>
<tr>
<td></td>
<td>Anthracnose (Monilina laxa, M. fructicola)</td>
<td>8 fl. oz.</td>
<td>Apply when conditions favor disease development. Continue applications on a 7 to 10 day interval using the highest rate for control. If conditions are favorable for disease development, additional applications may be made at 7 to 10 day intervals.</td>
</tr>
</tbody>
</table>

**CABBAGE**

<table>
<thead>
<tr>
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<tr>
<td></td>
<td>Oil Alone:</td>
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**CARROTS**

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</thead>
<tbody>
<tr>
<td></td>
<td>Leaf Blight (Cercospora carotae)</td>
<td>4 fl. oz.</td>
<td>Apply when conditions favor disease development. Continue applications on a 7 to 10 day interval using the highest rate for control. If desired, a spreader-sticker may be used.</td>
</tr>
<tr>
<td></td>
<td>Powdery Mildew (Erysiphe polygoni)</td>
<td>2 fl. oz.</td>
<td>Apply recommended rate of Bumper 41.8 EC with 0.75 lb. a.i. propiconazole per acre. Begin applications when conditions favor disease development. Continue applications on a 7 to 10 day interval.</td>
</tr>
</tbody>
</table>

**GENERAL INFORMATION**

- Do not apply more than 0.45 lb. a.i. propiconazole per acre per season.
- Do not apply more than 16 fl. oz. per acre per season of Bumper 41.8 EC.
- Bumper 41.8 EC may be applied by either ground or aerial equipment in sufficient volume to provide thorough coverage on a 7 to 10 day interval.
### CEREALES
- **FILBERTS (Hazelnuts)** (OR, WA, WI only)
  - **Control** of leaf diseases: Rusts (Puccinia spp.), Powdery mildew (Erysiphe spp.), Leaf Blight (Glomerella cingulata), Barley striped leaf (Rhynchosporium secalis), Barley stripe leaf (Pyrenophora teres) 4 fl. oz.
- **Foot rot** (Pseudocercosporella herpotrichoides) 4 fl. oz.
- **Early Season Suppression of**: 2 – 4 fl. oz. For early season leaf disease suppression, apply recommended rate of Bumper 41.8 EC 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.

### CITRUS
- **Peach, Nectarine, and Almonds** 6 – 8 fl. oz. Begin applications in June. Apply at 30 day intervals through August. Bumper 41.8 EC may be applied by either ground or aerial application in a minimum of 15 gals. per acre.
- **Citrus hybrids**: Do not apply more than 24 fl. oz. per acre per season of Bumper 41.8 EC. Do not apply to citrus that will bear harvestable fruit within 12 months.

### SWEET CORN
- **Corn, field, seed, and popcorn**
  - **Helminthosporium leaf blights**: 2 – 4 fl. oz. Use the low rate when disease pressure is low. Under heavy pressure or when conditions favor disease development, apply the high rate. Apply Bumper 41.8 EC at recommended rates by ground, or as chemigation. Applications may be made no closer than a 14 day interval. For best disease control, early applications at initial disease onset perform better.

### CRANBERRIES
- **(RI, WA, WI only)**
  - **Cutthroat** (Mitchella neglecta) 4 – 6 fl. oz. Use the low rate when disease pressure is low. Under heavy pressure or when conditions favor disease development, apply the high rate. Apply Bumper 41.8 EC at recommended rates by ground, or as chemigation. Applications may be made no closer than a 14 day interval. For best disease control, early applications at initial disease onset perform better.

### FLEBERTS (Hazelnuts)
- **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, increase the higher rate and shorter interval. In certain varieties, Bumper 41.8 EC 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 gals. per acre.

### CONCLUSIONS
- **Do not apply more than 20 fl. oz. per acre per season of Bumper 41.8 EC.**
- **Do not apply more than 0.67 lbs. a.i. propiconazole per acre per season.**
- **Do not apply within 60 days of harvest.**
- **Do not graze livestock in treated areas or cut treated crop for feed.**
- **Apply recommended rate of Bumper 41.8 EC on a 7-day schedule either by ground or as. If desired, Bumper 41.8 EC may be tank mixed with an appropriate spreader-sticker. Apply in 10 gals. of water for ground application or 5 gals. of water for aerial application.**
- **Do not apply more than 16 fl. oz. of Bumper 41.8 EC per acre per crop season.**
- **Do not apply within 14 days of harvest.**
- **Do not apply more than 0.45 lbs. a.i. propiconazole per acre per season.**

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**Note:** Applications may be made using ground, or as chemigation equipment.
- **Do not apply more than 8.8 fl. oz. of Bumper 41.8 EC per acre per season, but do not apply more than 4 fl. oz. per acre per season if forage or hay will be harvested.**
- **Do not apply more than 30 days of harvest for forage, 40 days before harvest for grain and straw, and 45 days before harvest for hay.**
- **Do not apply more than 0.22 lbs. a.i. propiconazole per acre per season.**

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**Disclaimer:** The information provided is for general guidance and may not be applicable to all situations. Always consult the product label for specific instructions and recommendations. **Do not apply more than 0.67 lbs. a.i. propiconazole per acre per season.**
- **Do not apply more than 24 fl. oz. per acre per season of Bumper 41.8 EC.**
- **Do not apply to citrus that will bear harvestable fruit within 12 months.**
- **Do not apply more than 0.67 lbs. a.i. propiconazole per acre per season.**

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**Use:** Applications may be made no closer than a 14 day interval. For best disease control, early applications at initial disease onset perform better.
Apply Bumper 41.8 EC at recommended rates by ground, by air in a minimum of 10 gals. of water per acre, or through irrigation equipment.

Apply when powdery mildew and Sclerotonia 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.

**CRP**
**PESTS CONTROLLED**
**RATE OF APPLICATION PER ACRE**
**RECOMMENDATIONS**

<table>
<thead>
<tr>
<th>CRP</th>
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</tr>
</thead>
<tbody>
<tr>
<td>GRASSES GROWN FOR SEED</td>
<td>Nuts (Puccinia spp.) Powdery mildew (Erysiphe spp.)</td>
<td>4 – 8 fl. oz.</td>
<td>Apply recommended rate of Bumper 41.8 EC in a minimum of 20 gals. of water per acre using ground application. Begin applications when plants are 2 to 4 inches high or when conditions become favorable for disease development. Make a second application 14 days after the first application.</td>
</tr>
<tr>
<td>MINT</td>
<td>Nuts (Puccinia monanth.)</td>
<td>4 fl. oz.</td>
<td>Apply recommended rate of Bumper 41.8 EC in a minimum of 20 gals. of water per acre using ground application. Begin applications when plants are 2 to 4 inches high or when conditions become favorable for disease development. Make a second application 14 days after the first application.</td>
</tr>
<tr>
<td>ONIONS (dry bulb) GARLIC SHALLOTS (dry bulb) ONION, GREEN Green Shallots Green Escalates Japanese bunching onions Japanese Scallions Spring Onions Scallions</td>
<td>Purple Blotch (Altemaria pan)</td>
<td>4 – 8 fl. oz.</td>
<td>Apply by ground in a minimum of 15 gals. of water per acre or by air in a minimum of 5 gals. of water per acre. Begin applications when conditions favor disease development and continue on a 7 to 10 day interval. Use the higher rate and shorter interval when disease conditions are severe. In tank mix, apply recommended rate in combination with another fungicide for 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 control, use a wetting agent or a spreader/sticker.</td>
</tr>
<tr>
<td>PEANUTS</td>
<td>Late leaf spot (Cercospora arachidicola)</td>
<td>2.5 – 4 fl. oz.</td>
<td>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.</td>
</tr>
<tr>
<td>Southern Stem Rot (Sclerotium rolfsii)</td>
<td>See RECOMMENDATIONS section for appropriate rate</td>
<td></td>
<td>Apply Bumper 41.8 EC at the recommended rate according to 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. 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, 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 41.8 EC via irrigation or directed ground application, additional methods should be used for leaf spot control.</td>
</tr>
</tbody>
</table>

**Notes:**
- Do not apply more than 22 fl. oz. of Bumper 41.8 EC per acre per growing cycle.
- Do not feed hay cut within 20 days of the last application.
- Do not graze treated areas within 140 days of the last application.
- Do not apply more than 0.95 lb. a.i. propiconazole per acre per season.
PECANS

Pecan Scab (Cylindrosporum caryigenum)
Downy Mildew (Mycosphaerella caryigena)
Leaf Spot (Gonostoma carya pv. pecanis)
Verticillium (Verticillium dahliae)
Zinnia Leaf Spot (Cercospora zinniae)
Cadmium Leaf Spot (Microsphaera corymbica)
Pecan Scab: Apply 4 – 8 fl. oz. per acre on a 14 day schedule during bud break and pre-pollination sprays. Apply 8 – 9 fl. oz. per acre during nut formation and cover sprays. Use higher rates when disease pressure is heavier.

Other listed foliar diseases: Apply 4 oz. or 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 41.8 EC may be applied by either ground or 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 http://www.ars.usda.gov/ocs/pecanmap.htm. Bulletins may also be available from local pesticide dealers, extension offices, or state pesticide agencies.

PISTACHIOS

Bacillus Bolide and Sheath Blight (Bacillus polymyxa)

6 – 8 fl. oz.

Apply 6 fl. oz. per acre at first internode elongation (up to 2 – 3 inch panicle) and repeat at swollen boot. Make the second application 10 to 14 days after the first application but before the boot upsets 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 – 3 inch panicle). The 10 oz. rate is recommended if greater than 10% of the tillers are infected with sheath blight. For disease reappearance, 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.

RICE

Shoot blight (Microsphaera zeae)
Brown leaf spot (Helminthosporium oryzae)
Black sheath rot (Rhizoctonia oryzae-sativa)
Aggregate sheath spot (Ciborinia oryzae)
Kernal smut (Tilletia barclayana)
Lemna minor (Helminthosporium oryzae-sativa)
Brown spot (Bipolaris oryzae)
Brown leaf spot (Helminthosporium oryzae)
Narrow brown leaf spot and brown blotch (Cercospora oryzae)
False smut suppression (Sclerotium oryzae)
C. Apply 6 fl. oz. per acre in a tank mix with Quadris® or other fungicides for control of diseases of rice.

Apply recommended rate of Bumper 41.8 EC per acre at both heading and heading, or make a single application of 8 fl. oz. per acre at booting. Make application using aerial application equipment. The minimum application interval is 15 days.

For Rice and Wild Rice Uses: 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 http://www.ars.usda.gov/ocs/pecanmap.htm. Bulletins may also be available from local pesticide dealers, extension offices, or state pesticide agencies.

Wild Rice (MN only)

Helminthosporium leaf blight and brown spot (Bipolaris spp.)

Apply recommended rate of Bumper 41.8 EC per acre at both heading and heading, or make a single application of 8 fl. oz. per acre at booting. Make application using aerial application equipment. The minimum application interval is 15 days.

For Rice and Wild Rice Uses: 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 http://www.ars.usda.gov/ocs/pecanmap.htm. Bulletins may also be available from local pesticide dealers, extension offices, or state pesticide agencies.
Aerial Web Blight
(Paecilomyces fumosus)
Anthracnose
(Cylindrocladium truncatum)
Brown Spot
(Septoria glycines)
Frogeye Leaf Spot
(Coniothyrium spp.)
Soybean Rust
(Phakopsora pachyrhizi)

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, adding an oil-based additive is recommended for improved coverage and penetration.

Applying 4 – 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 R0 (early pod set) when pods are 1/8 to 1/4 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 fruit and incidence is less than 2%. If 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.

Brown Rot Blossom Blight
(Monilinia sloani)

Apply by ground or air in a minimum of 15 gal. per acre at bloom. Stone fruit diseases are most effectively controlled by ground applications. If disease pressure is low, a second application may be made as needed to control leaf 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.

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. Make up to 2 additional applications on a 10 to 14 day interval from the end of petal fall to harvest.

Brown Rot
(Monilinia sloani)

Apply 4 – 6 fl. oz. of Bumper 41.8 EC per acre per season.

Applications may be made up to growth stage Rb. Do not apply more than 0.34 lb. a.i. propiconazole per acre per season.

Leaf Rust
(Sphaerotheca macularis)

Do not apply more than 20 fl. oz. of Bumper 41.8 EC per acre per season.

Do not apply more than 0.56 lb. a.i. propiconazole per acre per season.

Bumper 41.8 EC may be applied on the day of harvest.

Do not apply more than 0.34 lb. a.i. propiconazole per acre per season.

Leaf Blight
(Cephalosporium sp.)

Frogeye Leaf Spot
(Phyllachora pachyrhizi)

Do not apply more than 20 fl. oz. of Bumper 41.8 EC per acre per season.

Do not apply more than 0.56 lb. a.i. propiconazole per acre per season.

Bumper 41.8 EC may be applied on the day of harvest.

Do not apply more than 0.34 lb. a.i. propiconazole per acre per season.

Leaf Rust
(Phragmidium potentillae)

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

Bumper 41.8 EC may be applied on the day of harvest.

Do not apply more than 0.34 lb. a.i. propiconazole per acre per season.

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(Phyllachora pachyrhizi)

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Bumper 41.8 EC may be applied on the day of harvest.

Do not apply more than 0.34 lb. a.i. propiconazole per acre per season.


**LIMITATION OF LIABILITY**

Do not apply more than 30 fl. oz. of Bumper 41.8 EC per acre per season.

- Do not apply within 60 days of harvest except for pecan (see specific directions in PECAN section of this label).
- Do not apply more than 32 fl. oz. of Bumper 41.8 EC per acre.
- Do not graze livestock in treated areas or cut treated cover crop for feed.

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**FL. OZ. OF BUMPER 41.8 EC PER ACRE**

<table>
<thead>
<tr>
<th>FL. OZ.</th>
<th>LB. A.I. PER ACRE</th>
<th>ACRES TREATED PER 1 GALLON OF BUMPER 41.8 EC</th>
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<td>32</td>
<td>0.92</td>
<td>4.0</td>
</tr>
</tbody>
</table>

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**STORAGE AND DISPOSAL**

Do not apply more than 0.90 lb. a.i. propiconazole per acre per season.

- Do not apply within 60 days of harvest except for pecan (see specific directions in PECAN section of this label).
- Do not apply more than 32 fl. oz. of Bumper 41.8 EC per acre.
- Do not graze livestock in treated areas or cut treated cover crop for feed.

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**STORAGE**

- Store in the original container in a cool and secure place.
- Pesticide Storage: Store in the original container in a cool and secure place.

**DISPOSAL**

- Do not apply more than 0.90 lb. a.i. propiconazole per acre per season.
- Do not apply within 60 days of harvest except for pecan (see specific directions in PECAN section of this label).
- Do not apply more than 32 fl. oz. of Bumper 41.8 EC per acre.
- Do not graze livestock in treated areas or cut treated cover crop for feed.