

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Mr Charles Levey BASF Corporation Agricultural Products 26 Davis Drive Research Triangle Park, NC 27709

AUG 8 2009

Subject: Label Notification(s) for Pesticide Registration Notice 2007-4

Dear Mr. Levey:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 dated June 18, 08 for:

# EPA Registration 241-427 Forum Fungicide

The Registration Division (RD) has conducted a review of this request for applicability under PRN 2007-4 and finds that the label change(s) requested falls within the scope of PRN-2007-4. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact me directly at 703-305-6249 or Banza Djapao of my staff at 703-305-7269.

Sincerely,

Linda Arrington

Notifications & Minor Formulations Team Leader Registration Division (7505P)

Office of Pesticide Programs

Please read instructions or	reverse before comple	ting form.		Form Approve	d. OMB No. 20	70-0060	. Approval expires 2-28-9
<b>\$EPA</b>	Environmenta	Inited States  i Protectio ngton, DC 2046		<b>✓</b>	Registrati Amendm Other		OPP Identifier Number
		Applicatio	n for Pestic	ide - Section	1		
1. Company/Product Numb 241-427	er		1	Product Manager Waller		3. Pro	posed Classification
4. Company/Product (Name Forum Fungicide	<b>ə</b> )		<b>PM#</b> 21				Trosancioa
5. Name and Address of A	pplicant (Include ZIP Co	de)	6. Exp	edited Reveiw	. In accordance	e with	FIFRA Section 3(c)(3)
BASF Corporation 26 Davis Dr. Durham, NC 27709			to: EPA	Reg. No	NOTH	FICAT	•
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<u></u>			Section -	<u> </u>	·		
Notification - Explain	ponse to Agency letter		· · · · · · · · · · · · · · · · · · ·	Final printed labe Agency letter da "Me Too" Applic Other - Explain b	ted cation.	0	
"Notification of label change regulations at 40 CFR §§ 15 Formula for this product. It amended label is not consist FIFRA and I may be subject.	e per PR Notice 2007-4. 56.10, 156.140, 156.144, understand that it is a vio stent with the requiremen	This notification 156.146, and 15 lation of 18 U.S. ts of 40 CFR §§	is consistent with t 56.156. No other of C. Sec. 1001 to wi 156.10, 156.140, 1 der sections 12 and	changes have been lifully make any fals 156.144, 156.146, a I 14 of FIFRA."	made to the labe se statement to E	ling or th	e Confidential Statement of her understand that if the
			Section - I	<u> </u>			
1. Material This Product W	ill Be Packaged In:		·				
Child-Resistant Packaging Yes No * Certification must be submitted	Unit Packaging Yes No If "Yes" Unit Packaging wgt.	No. per container	Water Soluble F Yes No If "Yes" Package wgt	No. per container		ntainer Metal Plastic Glass Paper Other (Sp	pecify)
3. Location of Net Contents	Information	4. Size(s) Reta	il Container	5. Lc	ocation of Label	Direction	ns
Label	Container	•					
6. Manner in Which Lebel is	Affixed to Product	Lithogra Paper g Stencile	aph lued	Other			
			Section - I'	V			
1. Contact Point  Complete	items directly below f	or identification	of individual to b	e contacted, if nec	essary, to proce	ess this e	application.)
Name Charles T. Levey		j	Fitte Product Registra	tion Manager	j		No. (Include Area Code) 059 မရှိမရ
	ements I have made on ny knowlinglly false or i		ll attachments the			ete.	6. Date Application Received GCCOO (Stamped)
2. Signature	fuel		. Title Product Registration	on Manager	( ). ( )	10	
4. Typed Name  Charles T. Levey charles	s.levev@basf.com	5.	. Date .lun	e 17 2008			



June 18, 2008

Ms. Mary Waller (PM 21)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202-4501

Subject: Label Notification for Forum Fungicide (EPA Reg. No. 241-427) per PR Notice 2007-4.

Dear Ms. Waller,

BASF Corporation is submitting a final label notification in response PR Notice 2007-4 for the subject product registration. Please call me at 919-547-2059 or email at charles.levey@basf.com, if you have any questions in regards to this submission. Thanks in advance for your cooperation.

Charles T. Levey

Product Registration Manager

**BASF** Corporation

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BASF Corporation Agricultural Products 26 Davis Drive Research Triangle Park, NC 27709 Tel: (800) 669-1770 www.agproducts.basf.com



NOTIFICATION AUG 0 8 2008



# FUNGICIDE

For Use in Brassica Leafy Vegetables, Bulb Vegetables, Cucurbit Vegetables, Fruiting Vegetables, Hops, Lettuce, Potatoes, Taro, Tobacco and Field Grown Tomatoes.

EPA Reg. No. 2 U.S. Patent No.										E	PΑ	. <b>E</b>	st	. 1	No	١.	 	 	
*Equivalent to 4.17	pounds dimethon	orph p	er ga	alion	•														
Total:				· · ·		 			 									 .1	00.0%
Other Ingredie	nts:					 	٠							٠.				 	<u>56.5%</u>
Active Ingredice dimethomorph*						 . <b>.</b>		٠.٠		, .									

# KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

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

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

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

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BASF Corporation 26 Davis Drive, Research Triangle Park, NC 27709

*	FIRST AID					
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>DO NOT induce vomiting unless told to do so by a poison control center or doctor.</li> <li>DO NOT give anything by mouth to an unconscious person.</li> </ul>					
If on skin or clothing	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>					
HOTLINE NUMBER						

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

# PRECAUTIONARY STATEMENTS

# HAZARDS TO HUMANS AND DOMESTIC ANIMALS

# CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. 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 A** on an EPA chemical-resistance category selection chart.

# Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material, such as polyethylene or polyvinyl chloride
- Shoes plus socks

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

# **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.

# **Environmental Hazards**

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

# **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 when wind conditions favor drift

**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 (WPS).

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

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, wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material, such as polyethylene or polyvinyl chloride.
- Shoes plus socks

# Storage and Disposal

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

# Pesticide Storage

Store in a cool, well-ventilated area. **DO NOT** allow to become overheated in storage. Keep container closed when not in use.

# **Pesticide Disposal**

Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

# **Container Disposal**

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Then offer for recycling, if available, or puncture and dispose of in an approved sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure 2 more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure 2 more times.

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

# **GENERAL INFORMATION**

THIS LABELING MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF FUNGICIDE APPLICATION.

**DO NOT** apply this product through any type of irrigation system unless the label instructions on chemigation are followed. See below for **Chemigation Use Directions**.

Forum fungicide should be used in a preventive spray program to manage the target diseases. Maximum results can only be achieved by thorough plant coverage. Forum must be used in accordance with this label.

It is recommended that this product be used within an Integrated Pest Management (IPM) Program.

Fungus strains have developed resistance to some fungicides after repeated use. Since the development of resistance cannot be predicted, **Forum** should always be used in a resistance management program. Tank mixing and thorough spray coverage are necessary to minimize the development of fungus strains with resistance to **Forum**.

In order to reduce the risk of the development of fungicide resistance, **Forum** must be used as a tank mix with a fungicide that has a different mode of action (non-**Group 15** fungicides) and is effective against the pathogen of concern.

**Forum** is not for use in greenhouse or transplant production.

The use of **Forum** in all tobacco transplant production systems (including greenhouse, float-beds, and traditional around beds) is **STRICTLY PROHIBITED**.

DO NOT use Forum in transplant water.

Carefully read, understand, and follow all directions and precautions.

Disease pressure, plant growth rate, and environmental conditions will determine the length of the spray interval and the rate of **Forum**. Consult local disease forecast advisory system recommendations to determine the predicted disease pressure and the associated application rates and intervals. Sprayers should be properly calibrated before application. Determine the size of the area to be sprayed and the output rate to determine the quantities of **Forum** and water needed for accurate application. Apply material with adequate spray pressure, water volume, and proper nozzle arrangement to provide full coverage.

# Mode of Action

Dimethomorph, the active ingredient of **Forum**, belongs to the group of cell wall synthesis inhibitors, classified by the USEPA and Canada PMRA as Target Site of Action **Group 15** fungicides.

# RESISTANCE MANAGEMENT

Forum contains dimethomorph, a **Group 15** fungicide, and is effective against pathogens resistant to fungicides with modes of action different from **Group 15**. Fungal isolates resistant to **Group 15** fungicides may eventually dominate the fungal population if **Group 15** fungicides are used predominantly and repeatedly in the same field in successive years as the primary method of control for the targeted pathogen species. This may result in reduction of disease control by **Forum** or other **Group 15** fungicides.

To maintain the performance of **Forum** in the field, **DO NOT** exceed the total number of sequential applications of **Forum** and the total number of applications of **Forum** per
season stated in the **DIRECTIONS FOR APPLICATION**section. Adhere to the label instructions regarding the consecutive use of **Forum** or other target site of action

**Group 15** full-gicides that have a similar site of action on the same pathogens.

The following recommendations may be considered to delay the development of fungicide resistance:

- 1. Tank mixtures: Use tank mixtures with fungicides from different target site of action groups that are registered/permitted for the same use and that are effective against the pathogens of concern. BASF recommends using at least the minimum labeled rates of each fungicide in the tank mix.
- 2. IPM: Forum® fungicide should be integrated into an overall disease and pest management program. Cultural practices known to reduce disease development should be followed. Consult your local extension specialist, certified crop advisor and/or BASF representative for additional IPM strategies established for your area. Forum may be used in Agricultural Extension advisory (disease forecasting) programs, which recommend application timing based on environmental factors favorable for disease development.
- 3. Monitoring: Monitor efficacy of all fungicides used in the disease management program against the targeted pathogen and record other factors that may influence fungicide performance and/or disease development. If a **Group 15** target site fungicide, such as **Forum**, appears to be less effective against a pathogen that it previously controlled or suppressed, contact a BASF representative, local extension specialist, or certified crop advisor for further investigation.

# ADDITIVES AND GENERAL TANK MIXING INFORMATION

Forum can be tank mixed with most recommended fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives, as specified in the crop specific recommendations in the **DIRECTIONS** FOR APPLICATION section of this label. Under some conditions, the use of additives or adjuvants may improve the performance of Forum; however, all varieties and cultivars have not been tested with all possible tank mix combinations. Local conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, or crop injury may result from mixing Forum with other products. Therefore, before using any tank mix (fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants and additives), test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

# MIXING INSTRUCTIONS

Fill the spray tank until it is approximately 1/2 full with clean water. Shake the **Forum** container well, then slowly add **Forum** to the spray tank while agitating. Agitation must be engaged prior to the addition of the product to obtain a complete and uniform mixture of **Forum**.

Limit amount of spray mixture prepared to that needed for immediate use.

# Mixing Order

- 1) Water: Begin by agitating a thoroughly clean sprayer tank half full of clean water.
- 2) Products in PVA bags: Place the water-soluble PVA bag into the mixing tank. The water-soluble PVA bag will dissolve in water to allow the contents to disperse. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- 3) Water-dispersible products: (wettable powders, dry flowables, suspension concentrates, including Forum, or suspo-emulsions).
- 4) Water-soluble products.
- 5) **Emulsifiable concentrates:** (oil concentrate or methylated seed oil, when applicable).
- 6) Water-soluble additives: (ammonium sulfate or urea ammonium nitrate, when applicable).
- 7) Remaining quantity water.

Maintain maximum constant agitation during application. Thorough agitation is required if the mixture is allowed to stand for a prolonged period of time.

#### COMPATIBILITY

The tank mixing behavior of this fungicide with other pesticides has not been fully investigated. If tank mixing with other pesticides is desirable, conduct a jar test with rates and volumes of carrier typically used in an agricultural application. Look for signs of separation, globules, sludge, flakes or other precipitates. DO NOT tank mix with the other pesticides if the jar test with Forum has indicated incompatibility.

# TANK MIXES WITH FUNGICIDES

DO NOT apply Forum alone. Forum must be used in a tank mix with a fungicide that has a different mode of action (non-Group 15 fungicide) and is effective against the pathogen of concern. Refer to the respective tank mix partner labeling for rates, methods of application, proper timing, restrictions and precautions. Always use in accordance with the more restrictive label restrictions and precautions. DO NOT use a pesticide product that contains a prohibition against tank mixing.

# **AERIAL SPRAY APPLICATIONS**

Aerial application is permitted for all labeled crops except hops. Prior to aerial application, check the aircraft for uniformity of spray pattern, spray swath width and output. If hollow cone or whirlplate nozzles are used, it is recommended that they be positioned straight down or slightly backward. When using nozzles that produce relatively straight streams (e.g. D-series orifice with no core), the recommended positioning is straight back or slightly down from back. Uniformly apply with properly calibrated aerial equipment in 5 or more gallons of water per acre. If foliage is dense, use an output that will ensure optimum fungicide penetration. Spray swaths should be marked using flaggers who are in completely enclosed vehicles,

by counting rows, or by using some other marking device. **DO NOT** apply when weather conditions favor drift.

# **CHEMIGATION USE DIRECTIONS**

**Forum®** fungicide can be applied prior to the onset of disease infection on a regular protectant spray schedule, not an irrigation schedule.

Chemigation applications must be made according to the crop-specific spray schedule interval recommendation in the **DIRECTIONS FOR APPLICATION** section of this label and may depend on disease pressure and environmental conditions. Consult local disease control advisory system recommendations to determine the predicted disease pressure and the associated application rates and intervals. Chemigation applications may need to be supplemented with ground or aerial applications if irrigation cycles are less frequent than what is recommended on the label to obtain optimum control.

Apply **Forum** only through sprinkler irrigation systems including center-pivot, lateral move, side (wheel) roll, solid set, or hand move irrigation systems. **DO NOT** apply product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service Specialists, equipment manufacturers or other experts.

The irrigation system must be correctly calibrated (with water only) to ensure that the recommended rate of **Forum** is applied.

**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. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional reduced-pressure zone (RPZ) backflow preventer, or the functional equivalent, in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

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. The system should have properly working nozzles providing

the recommended output and pattern. The chemigation system should also be free of leaks.

# Overhead sprinkler irrigation system requirements:

- 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 back flow.
- 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, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution s adversely affected.
- 5. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point that 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 for treatment.

# The following routine checks will help to ensure that the sprinkler irrigation system is working properly:

- 1. Use a calibrated injection metering pump, as specified by the manufacturer.
- 2. Metering pumps, the supply tank, and any associated equipment must be clean and dry before adding diluted **Forum** to the system for injection.
- 3. Check the metering pump periodically to confirm that **Forum** is being injected continuously and at the proper calibration throughout the irrigation period.
- 4. Continuous agitation must be maintained in the supply tank during the entire overhead sprinkler irrigation period.

# Center Pivot, and Lateral Move Irrigation Equipment (Use only with electric or oil hydraulic drive systems which provide a uniform water distribution)

- 1. Determine size of area to be treated.
- Determine the time required to apply the least amount of water. No more than 0.2 inches of water should be applied over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer's rated capacity.
- 3. Using only water, determine the injection pump output when operated at normal line pressure.
- 4. Determine the amount of **Forum** fungicide required to treat area.

- Add the required amount of Forum fungicide and sufficient water to meet the injection time requirements of the solution tank.
- 6. Maintain constant solution tank agitation during the injection period.
- 7. Stop injection equipment after treatment is completed. Continue to operate the system until **Forum** fungicide solution has cleared the last sprinkler head.

# Solid-Set, Side (wheel) Roll, and Hand Move Irrigation Equipment:

- 1. Determine acreage covered by sprinkler.
- 2. Fill injector solution tank with water and adjust flow rate to use contents over a 10- to 30-minute interval.
- 3. Determine the amount of **Forum** fungicide required to treat the area.
- 4. Add the required amount of **Forum** fungicide into the same quantity of water used to calibrate the injection equipment.
- Maintain constant solution tank agitation during the injection period.
- 6. Operate system at normal pressures recommended by the manufacturer of the injection equipment and use for the time interval established during calibration.
- 7. Inject **Forum** fungicide at the end of the irrigation cycle, or as a separate application, to maximize foliar fungicide retention.
- 8. Stop injection equipment after treatment is completed. Continue to operate the system until **Forum** solution has cleared the last sprinkler head.

# **DIRECTIONS FOR APPLICATION**

Maximum benefit of **Forum® fungicide** from foliar applications requires thorough coverage of the plant. To obtain thorough coverage of foliage, use proper spray pressure and a minimum of 20 gallons per acre for ground applications and 5 gallons per acre for aerial applications.

5 gallons per acre for aer  Crop	Target Disease	Use Rate (ozs Product per Acre per Application)	General Recommendations	Restrictions
Brassica Leafy Vegetables  Leafy: Broccoli raab Chinese Cabbage (Bok Choy) Collards Kale Mizuma Mustard Greens Mustard Spinach Rape Greens Head and Stem:	Downy Mildew (Peronospora parasitica)	6	Forum must be applied as a tank mix with another fungicide that has a different mode of action (non-Group 15 fungicides).  DO NOT make more than 2 sequential applications of Forum before alternating to another fungicide with a mode of action different from Forum (non-Group 15 fungicides) for at least 1 application.	DO NOT make more than 5 applications per season.  DO NOT exceed 30 oz per acre per growing season.  DO NOT use less than 20 gallons of water per acre for ground applications and 5 gallons per acre for aerial applications.  Leafy Brassica Greens may
Broccoli Chinese Broccoli Brussels Sprouts Cabbage Chinese Cabbage (Napa) Chinese Mustard Cauliflower Cavalo broccolo Kohlrabi			Begin applications when conditions favor disease development. Continue applications on a 7-day spray schedule, as needed, until weather conditions favoring infection and sporulation decrease.	be harvested on the day of the last application after sprays have dried. <b>DO NOT</b> apply within 7 days of harvest of Brassica Head and Stem Vegetables
Bulb Vegetables  Garlic Garlic, great-headed Leek Onion, dry bulb Onion, green Onion, Welch Shallot	Downy Mildew (Peronospora destructor)	6	Forum must be applied as a tank mix with another fungicide that has a different mode of action (non-Group 15 fungicides).  DO NOT make more than 2 sequential applications of Forum before alternating to another fungicide with a mode of action different from Forum (non-Group 15 fungicides) for at least 1 application.  Begin applications when conditions favor disease development. Continue applications on a 5- to 7-day spray schedule, as needed, until weather conditions favoring infection and sporulation decrease.	DO NOT make more than 5 applications per season.  DO NOT exceed 30 oz per acre per growing season.  DO NOT use less than 20 gallons of water per acre for ground applications and 5 gallons per acre for aerial applications.  Bulbs or leaves may be harvested on the day of the last application after sprays have dried.

Crop	Target Disease	Use Rate (ozs Product per Acre per Application)	General Recommendations	Restrictions
Cucurbit Vegetables  Cantaloupe Chayote Chinese waxgourd Citron melon Cucumber Gherkin Gourd, edible Melon Momordica spp. Muskmelon Pumpkin Squash, summer Squash, winter Watermelon	Downy Mildew (Pseudoperonospora cubensis)	6	Forum® fungicide must be applied as a tank mix with another fungicide that has a different mode of action (non-Group 15 fungicides). DO NOT make more than 2 sequential applications of Forum before alternating to another fungicide with a mode of action different from Forum (non-Group 15 fungicides) for at least 1 application.  Begin applications prior to the onset of disease infection. Continue applications on a 5- to 10-day spray schedule. Use shorter spray intervals when disease pressure is higher.	DO NOT make more than 5 applications per season.  DO NOT exceed 30 oz per acre per growing season.  DO NOT use less than 20 gallons of water per acre for ground applications and 5 gallons per acre for aerial applications.  Cucurbits may be harvested on the day of the last application after sprays have dried.
Cucurbit Vegetables (continued)  Cantaloupe Chayote Chinese waxgourd Citron melon Cucumber Gherkin Gourd, edible Melon Momordica spp. Muskmelon Pumpkin Squash, summer Squash, winter Watermelon	Phytophthora Blight or Crown Rot (Phytophthora capsici)	6	Forum must be applied as a tank mix with another fungicide that has a different mode of action (non-Group 15 fungicides).  DO NOT make more than 2 sequential applications of Forum before alternating to another fungicide with a mode of action different from Forum (non-Group 15 fungicides) for at least 1 application.  Begin applications when plants are 4 to 6 inches high or prior to the onset of disease infection and spray to runoff.  Applications should be made on a 5- to 7-day spray schedule under higher disease pressure and on a 7- to 10-day spray schedule under low to moderate disease	DO NOT make more than 5 applications per season.  DO NOT exceed 30 oz per acre per growing season.  DO NOT use less than 20 gallons of water per acre for ground applications and 5 gallons per acre for aerial applications.  Cucurbits may be harvested on the day of the last application after sprays have dried.

Crop	Target Disease	Use Rate (ozs Product per Acre per Application)	General Recommendations	Restrictions
Fruiting Vegetables	Suppression only	. 6	Forum® fungicide must	DO NOT make more than
(except Tomato)	Phytophthora blight		be applied as a tank mix	5 applications per season.
,	(Phytophthora		with another fungicide that	DO NOT avasad 20 az
Eggplant	capsici)		has a different mode of	DO NOT exceed 30 oz
Ground cherry			action (non-Group 15	per acre per growing
Pepino			fungicides). <b>DO NOT</b> make	season.
Pepper (all varieties)			more than 2 sequential	DO NOT use less than
Tomatillo			applications of Forum	20 gallons of water per
			before alternating to anoth-	acre for ground applica-
•		•	er fungicide with a mode of	tions and 5 gallons per
· · · · · · · · · · · · · · · · · · ·			action different from	acre for aerial applications.
			Forum (non-Group 15	M 1
			fungicides) for at least 1	May be harvested the day
			application.	of the last application, after
			Begin applications when	spray has dried.
	·		plants are 4 to 6 inches	Not registered for use
		,	high and prior to the onset	on these crops in
			of disease infection. Apply	California.
			on a 5- to 10-day spray	
,			schedule. Prior to the	
			onset of conditions favor-	
		,	ling infection, apply every 7	
,			to 10 days. When environ-	
			mental conditions have	
·			been conducive for dis-	
	`		eases, or when disease	
			has been detected within	
•		,	the field or nearby, a 5- to	
			7-day schedule is	
	,		recommended.	
,		,		
			Apply spray to runoff.	
Hops	Downy Mildew	6	Forum must be applied as	DO NOT make more than
-	(Pseudoperonospora	,	a tank mix with another	3 applications per season.
	humuli)		fungicide that has a differ-	DO NOT avacant 10 an
	·		ent mode of action (non-	DO NOT exceed 18 oz
			Group 15 fungicides).	per acre per growing
,			Applications of Forum	season.
			must be alternated with at	DO NOT use less than
		•	least 1 application of a fun-	20 gallons of water per
			gicide with a mode of	acre.
			action different from	DO NOT ample establish
,		,	Forum (non-Group 15	DO NOT apply within
,			fungicides).	7 days of harvest.
,			Use <b>Forum</b> as a preven-	DO NOT make aerial
			tive foliar spray before	applications to hops.
			infection occurs. The appli-	,
			cation interval for <b>Forum</b> is	
			10 days.	

Crop	Target Disease	Use Rate (ozs Product per Acre per Application)	General Recommendations	Restrictions
Lettuce (head and leaf)	Downy Mildew (Bremia lactucae)	6	Forum® fungicide must be applied as a tank mix with another fungicide that has a different mode of action (non-Group 15 fungicides). DO NOT make more than 2 sequential applications of Forum before alternating to another fungicide with a mode of action different from Forum (non-Group 15 fungicides) for at least 1 application.  Begin applications prior to the onset of disease infection.  Continue applications on a 5- to 10-day spray schedule. Use shorter spray intervals when disease pressure is higher.	DO NOT make more than 5 applications per season.  DO NOT exceed 30 oz per acre per growing season.  DO NOT use less than 20 gallons of water per acre for ground applications and 5 gallons per acre for aerial applications.  Plants may be harvested on the day of the last application after sprays have dried.
Potato	Late Blight (Phytophthora infestans)	4 to 6	Forum must be applied as a tank mix with another fungicide that has a different mode of action (non-Group 15 fungicides). DO NOT make more than 2 sequential applications of Forum before alternating to another fungicide with a mode of action different from Forum (non-Group 15 fungicides) for at least 1 application.  Applications should begin prior to the onset of disease infection based on the recommendation of the local late blight advisory system. Apply on 5- to 10-day application intervals. Disease pressure and environmental conditions should determine application rates and spray intervals. Use higher rates and shorter spray intervals when disease pressure is higher. Consult local late blight advisory system recommendations to determine the predicted levels of disease pressure and the associated application rates and intervals.  Apply spray to obtain thorough and complete plant coverage. Forum may be applied after vine kill.	

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Crop	Target Disease	Use Rate (ozs Product per Acre per Application)	General Recommendations	Restrictions
Potato	Suppression only	6	When used according to label recommendations for	<b>DO NOT</b> exceed 30 oz per acre per growing season.
	Tuber Blight (Phytophthora infestans)		Late Blight control, Forum® fungicide can also reduce tuber blight.  To maximize activity against tuber blight, begin fungicide applications before disease onset occurs and in accordance with local late blight advisory system recommendations. Maintain regular	DO NOT use less than 20 gallons of water per acre for ground applications and 5 gallons per acre for aerial applications.  DO NOT apply within 4 days of harvest in all states.
			application schedules and obtain thorough plant coverage.	
			Forum must be applied as a tank mix with another fungicide that has a different mode of action (non-Group 15 fungicides). DO NOT make more than 2 sequential applications of Forum before alternating to another fungicide with a mode of action different from Forum (non-Group 15 fungicides) for at least 1 application.	
			Forum may be applied after vine kill.	
Taro	Suppression only Phytophthora Rot and Leaf Blight (Phytophthora spp.)	6	Forum must be applied as a tank mix with another fungicide with a different mode of action (non-Group 15 fungicides). DO NOT make more than 2 sequential applications of Forum before alternating to another fungicide with a mode of action different from Forum (non-Group 15 fungicides) for at least 1 application.  Begin applications when conditions favor disease development. Continue applications on a 7-day spray schedule as needed until weather conditions favorulation decrease.	DO NOT make more than 5 applications per season.  DO NOT exceed 30 oz per acre per growing season.  DO NOT use less than 20 gallons of water per acre for ground applications and 5 gallons per acre for aerial applications.  DO NOT apply within 7 or 30 days of harvest for the greens and corms, respectively.  Not registered for use on these crops in California.

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Crop	Target Disease	Use Rate (ozs Product per Acre per Application)	General Recommendations	Restrictions
Tobacco	Blue Mold (Peronospora tabacina)	2 to 8 ground 8 air	See specific use directions in the section titled DIRECTIONS FOR USE IN FIELD GROWN TOBACCO.	DO NOT exceed 30 oz per acre per growing season. DO NOT exceed 8 oz per
		Y	Forum® fungicide must be applied as a tank mix with another fungicide that has a different mode of action (non-Group 15 fungicides).	acre per application.  Tobacco may be harvested the day of the last application, after spray has dried.
Tomato - Nonstaked	Late Blight (Phytophthora infestans)	6	Forum must be applied as a tank mix with another fungicide that has a different mode of action (non-Group 15 fungicides).  DO NOT make more than 2 sequential applications of Forum before alternating to another fungicide with a mode of action different from Forum (non-Group 15 fungicides) for at least 1 application.	DO NOT exceed 30 oz per acre per growing season.  DO NOT use less than 20 gallons of water per acre for ground applications and 5 gallons per acre for aerial applications.  DO NOT apply within 4 days of harvest in all states.
			Begin applications when plants are 4 to 6 inches high and prior to the onset of disease infection. Apply on a 5- to 10-day spray schedule. Prior to the onset of conditions favoring infection, apply every 7 to 10 days. When environmental conditions have been conducive for diseases, or when disease has been detected within the field or nearby, a 5- to 7-day schedule is recommended.	
			Apply spray to obtain thorough and complete plant coverage.	

Crop	Target Disease	Use Rate (ozs Product per Acre per Application)	General Recommendations	Restrictions
Tomato - Staked	Late Blight (Phytophthora infestans)	6	Forum® fungicide must be applied as a tank mix with another fungicide that has a different mode of action (non-Group 15 fungicides). DO NOT makemore than 2 sequential applications of Forum before alternating to another fungicide with a mode of action different from Forum (non-Group 15 fungicides) for at least 1 application.	DO NOT exceed 30 oz per acre per growing season.  DO NOT use less than 20 gallons of water per acre for ground applications.  DO NOT apply within 4 days of harvest in all states.
			Begin applications when plants are 4 to 6 inches high and prior to the onset of disease infection. Apply on a 5- to 10-day spray schedule. Prior to the onset of conditions favoring infection, apply every 7 to 10 days. When environmental conditions have been conducive for diseases, or when disease has been detected within the field or nearby, a 5- to 7-day schedule is recommended.	
			For ground application use a minimum of 20 gallons of spray volume and increase the spray volume as the plants grow during the season. Spray volume should be proportional to the amount of plant tissue to be covered such that 100 gallons of spray per acre is used on mature plants. For aerial applications, follow the directions for nonstaked tomatoes	



above.

Apply spray to obtain thorough and complete plant coverage.

Application Timing, Rates and Spray Volumes To Control Blue Mold in Tobacco

Weeks of Growth After Transplant	Rate of Forum® fungicide (oz of Product)	Spray Volume for Tractor-Driven Sprayer (gallons/acre)	Spray Volume for Backpack Sprayer (gallons/acre)
Recently transplanted to 3 weeks after transplanting	2	20	10
3 to 4 weeks after transplanting (Knee High)	3	40	20
4 to 5 weeks after transplanting (Waist High)	4	60	30
6 to 7 weeks after transplanting (Chest High)	6	80	40
7 weeks after transplanting and beyond (Shoulder Height Up to Topping)	7	100	50

### **AERIAL SPRAY APPLICATIONS TO TOBACCO**

Aerial applications can be used by growers who have limitations with ground applications, or when weather conditions are unfavorable for timely applications by ground. Aerial sprayers should be properly calibrated before application.

Determine the area to be sprayed and the output rate to determine the quantities of **Forum** and water needed for accurate application. To obtain thorough coverage of the foliage, **use a minimum of 15 gallons per acre**, with nozzle positioning and orientation that favors plant coverage while minimizing drift.

For aerial applications, use 8 oz of **Forum** per acre for applications at all growth stages. **DO NOT** use rates lower than 8 oz of **Forum** per acre for aerial application.

# APPLICATION TIMING AND FREQUENCY IN TOBACCO

Begin applications when the **Blue Mold Advisory states** that conditions favor development of blue mold, and before the onset of disease infection. Continue applications on a 5- to 7-day spray schedule until weather conditions favoring infection and sporulation decrease.

#### **TOBACCO USE RESTRICTIONS**

**DO NOT** exceed 8 oz per acre per application. **DO NOT** exceed 30 oz per acre of **Forum** per season for all types of applications. **Forum** preharvest interval is zero days. Refer to tank mix partner labeling for preharvest interval restrictions.

The use of **Forum** in all tobacco transplant production systems (including greenhouses, float-beds, and traditional ground beds) prior to transplanting is **STRICTLY PROHIBITED**.

To reduce the possibility of developing tobacco blue mold resistance to both Forum and to mefenoxam products, the tank mixing of Forum with mefenoxam products is <u>STRICTLY PROHIBITED</u>. DO NOT use Forum in transplant water.

Blue mold fungal strains have developed resistance to some crop protection products after repeated use. Since the development of resistance cannot be predicted, **Forum** should always be used in a blue mold resistance management program. Tank mixing with non-**Group 15** fungicides and thorough spray coverage are necessary to minimize the development of blue mold strains with resistance to **Forum**.

# ROTATIONAL CROP GUIDELINES

After making the last Forum application, rotational crops may be planted at the following intervals:

# 1. Anytime

Brassica Leafy Vegetables	Lettuce (head and leaf)
Bulb Vegetables	Potatoes
Cucurbit Vegetables	Taro
Fruiting Vegetables	Tobacco
Hana	Tomatoes

### 2. One month

Hops

Barley	Root/tuber vegetables
Oats	(such as carrot, radish, and sugar beet)
Leafy vegetables (such	Wheat

### 3. Seven months

Alfalfa		Peas	
Beans		Rice	
Clover	·	Sorghum	
 Corn		Soybeans	

# 4. Twelve months

All other crops

# **Conditions of Sale and Warranty**

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

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

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