7969-302

	<b>ENVIRONMENTAL PROTECTION</b> of Chemical Safety and Pollution Prevention	EPA Reg Number 7969-302	Date of Issuance MAY 2 1 2012
MARKINGL PROTECTION	Office of Pesticide Programs Registration Division (7504P) 1200 Pennsylvania Ave, N W Washington DC 20460	Term of Issuance Unconditiona	1
N	OTICE OF PESTICIDE <u>X</u> Registration <u>Reregistration</u> (under FIFRA, as amended)	Name of Pesticide I Zampro Fung	
Name and Address of Registrant BASF Corporation 26 Davis Drive P O Box 13528 Research Triangle, NC		Mailed to the attention of Dr Jeffrey Birk Regulatory Mana	
Note Changes in labeling du	ffering in substance from that accepted in con the Registration Division prior to use of the let always refer to the above EPA registration	abel in commerce In	stration must be the any
registered under the Fed way to be construed as a order to protect health a suspend or cancel the re any name in connection	tion furnished by the registrant, the ab- eral Insecticide, Fungicide and Roden in endorsement or recommendation of nd the environment, the Administrator gistration of a pesticide in accordance with the registration of a product under a right to exclusive use of the name or	ticide Act Regist: this product by the , on his motion, m with the Act The er this Act is not to	ration is in no e Agency In ay at any time e acceptance of b be construed
This product is uncondi- that you	tionally registered in accordance with	FIFRA section 3(c	(5) provided
3(c)(5) when the	te all data required for registration of Agency requires all registrants of sim acceptable responses required for rere	ular products to su	bmit such product under
	· ·		Page 1of 2
Signature of Approving Official	ânfc	Date	2 1 2012
Marcel Howard			
Acting Product Manage EPA Form 8570 6	r 20, Fungicide Branch	<u> </u>	

05/21/2012

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Notice of Pesticide Registration Zampro Fungicide EPA Reg No 7969 302 Page 2 of 2

On page 1,

2 Change the product registration number to 7969-302

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e) Your release for shipment of the product constitutes acceptance of these conditions Submit one copy of the revised final printed label for the record before the product is released for shipment

The basic and alternate CSF A (both dated 12/13/11) are acceptable and will be added to the regulatory file A copy of the label stamped "Accepted with Comments" is enclosed for your records If you have any questions, please contact Shaunta Hill at 703-347-8961 or hill shaunta@epa gov or myself at 703-305-6784 or howard marcel@epa gov

Sincerely,

Maraf

Marcel Howard Acting Product Manager 20 Fungicide Branch Registration Division (7505P)

Enclosure Label stamped "Accepted with Comments" Product Chemistry review Acute Toxicity review



#### Group 45 40 Fungicide

#### ACCEPTED with COMMENTS In EPA Letter Dated

MAY 2 1 2012 Under the Federal Insecticide I ungicide and Rodenticide Act as amended for the pesticide registered under EPA Reg No

# Zampro v

#### For disease control in the following crops Brassica leafy vegetables, bulb vegetables, cucurbit vegetables, fruiting vegetables, grapes, hops, lettuce (head and leaf), and potato

Active Ingredients ametoctradin* 5 ethyl 6 octyl[1 2 4]triazolo[1 5 a]pyrimidin 7 amine	26 9%
dimethomorph** 4 [3 (4 chlorophenyl) 3 (3 4 dimethoxyphenyl) 1 oxo 2 propenyl]morpholine	20 2%
Other Ingredients	<u>52 9%</u>
Total	100 0%
Equivalent to 2 5 pounds ametoctradin per gallon	
Equivalent to 1 88 pounds dimethomorph per gallon	

EPA Reg No 7969-GNE

**EPA Est No** 

# KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

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 additional First Aid Precautionary Statements Directions For Use Conditions of Sale and Warranty and state specific crop and/or use site restrictions

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

#### **Net Contents**

BASF Corporation 26 Davis Drive Research Triangle Park NC 27709

FIRST AID				
<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>				
<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>				
<ul> <li>Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes</li> <li>Remove contact lenses if present after first 5 minutes then continue rinsing eyes</li> <li>Call a poison control center or doctor for treatment advice</li> </ul>				
<ul> <li>Move person to fresh air</li> <li>If person is not breathing call 911 or an ambulance then give artificial respiration preferably by 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 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 eyes skin or clothing Wash thoroughly with soap and water after handling and before eating drinking chewing gum using tobacco or using the toilet Remove and wash contaminated clothing before reuse

#### Personal Protective Equipment (PPE)

Some materials that are chemically resistant to this product are listed below. For more options refer to **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 mate rial (such as nitrile butyl neoprene and/or barrier laminate)
- Shoes plus socks

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

#### **Engineering Controls Statement**

When handlers use closed systems enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170 240(d)(4 6)] the handler PPE requirements may be reduced or modified as specified in the WPS

#### USER SAFETY RECOMMENDATIONS

#### **Users should**

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

#### **Environmental Hazards**

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

#### Groundwater

Ametoctradin and its degradates have properties and char acteristics associated with chemicals detected in groundwater These chemicals may leach into groundwater if used in areas where soils are permeable particularly where the water table is shallow

#### Surface Water

Ametoctradin and its degradates may impact surface water quality through spray and runoff of rainwater. This is espe cially true for poorly draining soils and soils with shallow groundwater. Ametoctradin and its degradates are classified as having high to medium potential for reaching surface water via runoff for several weeks after application. A level well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds streams and springs will reduce the poten tial loading of ametoctradin from runoff water and sediment Runoff of this product will be reduced by avoiding applica tions when rainfall is forecast to occur within 48 hours

#### **Directions For Use**

It is a violation of federal law to use this product in a man ner inconsistent with its labeling **DO NOT** apply this product in a way that will contact workers or other per sons 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) notification to workers and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard

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

PPE required for early entry into treated areas that is per mitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants soil or water is

- Long sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material (such as nitrile butyl neoprene and/or barrier laminate)
- 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 dis posed of on site or at an approved waste disposal facility

#### **Container Handling**

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

#### STORAGE AND DISPOSAL (continued)

#### Container Handling (continued)

Triple rinse containers small enough to shake (capacity  $\leq$  5 gallons) as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container 1/4 full with water and recap Shake for 10 sec onds 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 pro cedure two 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 clo sures Tip container on its side and roll it back and forth ensuring at least one complete revolution for 30 seconds Stand the container on its end and tip it back and forth several times Turn the container over onto its other end and tip it back and forth several times Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal Repeat this procedure two more times

**Pressure rinse as follows** Empty the remaining con tents into application equipment or mix tank and continue to drain for 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.

#### In Case of Emergency

In case of large scale spillage regarding this product call

- CHEMTREC 1 800 424 9300
- BASF Corporation 1 800 832 HELP (4357)

In case of medical emergency regarding this product call

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

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

- Dike and contain the spill with inert material (sand earth etc.) and transfer liquid and solid diking material to sepa rate containers for disposal
- Remove contaminated clothing and wash affected skin areas with soap and water
- Wash clothing before reuse
- Keep the spill out of all sewers and open bodies of water

#### **Product Information**

This package contains **Zampro® fungicide** a suspension concentrate (SC) with two active ingredients ametoctradin and dimethomorph. The active ingredients in **Zampro** 

(continued)

belong to two classes of fungicides with different modes of action Preventive applications optimize disease control To maximize disease control apply **Zampro® fungicide** in a regularly scheduled protective spray program and use in a rotation program with other fungicides

Zampro is not for use in greenhouse or transplant production

#### **Mode of Action**

Zampro contains two active ingredients ametoctradin and dimethomorph Ametoctradin a strong inhibitor of mitochondrial respiration in complex III (cytochrome bc1) of Oomycetes fungi is classified as a **Group 45** fungicide Dimethomorph belongs to the group of cell wall synthesis inhibitors and is classified as a **Group 40** fungicide

#### **Resistance Management**

Zampro contains ametoctradin and dimethomorph a pre mix of Group 45 and Group 40 fungicides and is effective against pathogens resistant to fungicides with modes of action different from those of target site Group 45 and Group 40

Fungal isolates resistant to **Group 45** or **Group 40** fungicides may eventually dominate the fungal population if **Group 45** or **Group 40** fungicides are used predominantly and repeatedly in the same field in successive years as the primary method of control for the targeted pathogen species especially if resistance to either **Group 45** or **Group 40** fungicides is already present in the pathogen population. This may result in reduction of disease control by **Zampro** or other **Group 45** or **Group 40** fungicides

To maintain the performance of **Zampro** in the field **DO NOT** exceed the total number of sequential applica tions of **Zampro** per season stated in the **Restrictions and Limitations** section and **Table 2 Zampro**<sup>®</sup> **fungicide Crop-specific Requirements** Adhere to the label instructions regarding the consecutive use of **Zampro** or other target site of action **Group 45** or **Group 40** fungicides that have a similar site of action on the same pathogen

#### **Resistance Management Advisory**

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

- 1 **Tank mixtures** Use tank mixtures with effective fungicides from different target site of action groups that are registered/permitted for the same use and that are effective against the pathogens of concern. Use at least the minimum labeled rates of each fungicide in the tank mix
- 2 **IPM** Integrate **Zampro** into an overall disease and pest management program Follow cultural practices known to reduce disease development Consult your local extension specialist certified crop advisor and/or BASF representative for additional IPM strategies estab lished for your area **Zampro** may be used in agricultural extension advisory (disease forecasting) programs which recommend application timing based on environ mental 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 45** or **Group 40** target site fungicide such as **Zampro** appears to be less effective against a pathogen that it previously controlled or suppressed contact a BASF representative local extension special ist or certified crop advisor for further investigation

#### **Application Instructions**

Apply rates of **Zampro** as instructed in **Table 2 Zampro**\* **fungicide Crop-specific Requirements** Apply **Zampro** with ground sprayer aerial equipment or through sprinkler or drip irrigation equipment. Check equipment frequently for calibration

Under low level disease conditions use the minimum application rates use maximum application rates and shortened spray schedules for severe or threatening dis ease conditions Maximum benefit of **Zampro** requires thorough coverage

#### **Cleaning Spray Equipment**

Spraying equipment must be cleaned thoroughly before and after applying this product particularly if a product with potential to injure crops was used prior to **Zampro** 

#### **Ground Application**

Apply **Zampro** in sufficient water to ensure thorough coverage of foliage blooms and fruit Thorough coverage is required for optimum disease control Unless otherwise specified in this label use no less than 20 gallons of spray solution per acre

#### Instructions for Directed or Banded Crop Sprays

The application rates shown in **Table 1 Zampro®** fungicide Restrictions and Limitations Overview and Table 2 Zampro® fungicide Crop-specific

**Requirements** pertain to both aerial and ground (broad cast) methods of application **Zampro** may also be applied as a directed or banded spray over the rows or plant beds with alleys or row middles left unsprayed For such uses reduce the rate of **Zampro** in proportion to the area sprayed Make this adjustment to prevent applying the product at use rates higher than permitted on this label

The following formula may be used to determine the broadcast equivalent rate for directed or banded sprays

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

**Example** A directed spray application will be made to 45 inch plant beds separated by 15 inches of unsprayed row middles

45 inches		15 inches		60 inches
sprayed bed	+	unsprayed	=	total row width
width		row middles		

The calculations to determine the appropriate equivalent rate of product to use for this situation based on a label broadcast rate of 12 fl ozs/acre follows

45 inches		12 fl ozs		
sprayed bed		Zampro <sup>®</sup>		9 fl ozs
width	х	fungicide	=	Zampro
60 inches		treated acre	·	field acre
total row width				

**Aerial Application** 

Use no less than 5 gallons of spray solution per acre to ensure thorough coverage of plant foliage **DO NOT** apply when conditions favor drift from target area Because com plete coverage is important for effective disease control aerial application may result in reduced control because of lack of canopy penetration and coverage

#### **Spray Drift Management**

**DO NOT** spray when conditions favor drift beyond area intended for application Conditions that may contribute to drift include thermal inversion wind speed and direction spray nozzle/pressure combinations spray droplet size temperature/humidity etc Contact your state extension agent for spray drift prevention guidelines in your area All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers Avoiding spray drift at the application site is the responsibil ity of the applicator

#### **Aerial Application Methods and Equipment**

The interaction of many equipment related and weather related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions

**DO NOT** apply under circumstances where possible drift to unprotected persons to food forage or other plantings that might be damaged or crops thereof rendered unfit for sale use or consumption can occur

The following drift management requirements must be fol lowed to avoid off target drift movement from aerial applications to agricultural field crops. These requirements **DO NOT** apply to forestry applications public health uses or to applications using dry formulations.

- 1 The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the fixed wingspan or 90% of rotor blade diameter
- 2 Nozzles must always point backward parallel with the airstream and never be pointed downward more than 45 degrees

Where states have more stringent regulations they must be observed

The applicator should be familiar with and take into account the information covered in the aerial drift reduction advisory information

#### Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets Use the largest droplet size consistent with acceptable efficacy Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **Wind Temperature and Humidity** and **Temperature Inversions**)

#### Controlling droplet size

- **Volume** Use high flow rate nozzles to apply the highest practical spray volume Nozzles with higher rated flows produce larger droplets
- **Pressure DO NOT** exceed the nozzle manufacturers recommended pressures For many nozzle types lower pressure produces larger droplets When higher flow rates are needed use higher flow rate nozzles instead of increasing pressure
- Number of Nozzles Use the minimum number of noz zles that provide uniform coverage
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice Significant deflection from the horizontal will reduce droplet size and increase drift potential
- **Nozzle Type** Use a nozzle type that is designed for the intended application With most nozzle types narrower spray angles produce larger droplets Consider using low drift nozzles Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift

#### Wind

Drift potential is lowest when wind speed does not exceed 10 mph However many factors including droplet size and equipment type determine drift potential at any given speed Application should be avoided below 2 mph due to variable wind direction and high inversion potential Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift

#### **Temperature and Humidity**

Low humidity and high temperatures increase the evapora tion of spray droplets and therefore the likelihood of increased spray drift Avoid spraying during conditions of low humidity and/or high temperatures When making applications in low relative humidity set up equipment to produce larger droplets to compensate for evaporation Droplet evaporation is most severe when conditions are both hot and dry

#### **Temperature Inversions**

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing that causes small suspended

droplets to remain in a concentrated cloud This cloud can move in unpredictable directions because of the light vari able winds common during inversions Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind They begin to form as the sun sets and often continue into the morning Their presence can be indicated by ground fog however if fog is not pres ent inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke genera tor Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing

#### **Sensitive Areas**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e g bodies of water or nontarget crops) is minimal and when wind is blowing away from the sensitive areas

#### Directions For Use Through Sprinkler or Drip Irrigation Systems

#### **Sprayer Preparation**

Chemical tank and injector system should be thoroughly cleaned. Flush system with clean water

#### **Application Instructions**

Apply **Zampro<sup>®</sup> fungicide** at rates and timings as required in this label

#### Use Precautions for Sprinkler or Drip Irrigation Applications

- Apply Zampro only through sprinkler or drip irrigation systems including center pivot lateral move end tow side [wheel] roll traveler big gun solid set or hand move irrigation systems DO NOT apply this product through any other type of irrigation system
- Add Zampro to the pesticide supply tank containing suf ficient water to maintain a continuous flow by the injection equipment. In continuous moving systems inject this product water mixture continuously applying the labeled rate per acre for that crop **DO NOT** exceed 1/2 inch (13 577 gallons) per acre In stationary or non continuous moving systems inject the product water mixture in the last 15 to 30 minutes of each set allowing sufficient time for all of the required pesticide to be applied by all the sprinkler heads and applying the labeled rate per acre for that crop **DO NOT** apply when wind speed favors drift beyond the area intended for treatment Crop injury lack of effectiveness or illegal pes ticide residues in the crop can result from nonuniform distribution of treated water Thorough coverage of foliage crown or roots is required for good control Maintain good agitation during the entire application period
- Contact a state extension service specialist equipment
   manufacturers or other experts for calibration questions

- 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 func tional 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 with drawn from the supply tank when the irrigation system is either automatically or manually shut down
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops
- The irrigation line or water pump must include a function al 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
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water A person knowledgeable of the chemigation system and responsible for its operation or under supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise
- **DO NOT** connect an irrigation system (including green house systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place

## Specific Instructions for Public Water Systems

- 1 Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year
- 2 Chemigation systems connected to public water sys tems must contain a functional reduced pressure zone back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesti cide 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

- 3 The pesticide injection pipeline must contain a function al automatic quick closing check valve to prevent the flow of fluid back toward the injection pump
- 4 The pesticide injection pipeline must contain a function al 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 with drawn from the supply tank when the irrigation system is either automatically or manually shut down
- 5 The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump when the water pressure decreases to the point where pesticide distribution is adversely affected
- 6 Systems must use a metering pump 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 fit ted with a system interlock

#### Additives and Tank Mixing Information

Zampro<sup>®</sup> fungicide can be tank mixed with most recom mended fungicides insecticides herbicides liquid fertilizers biological control products adjuvants and addi tives as specified in Table 2 Zampro<sup>®</sup> fungicide Crop-specific Requirements

The use of additives or adjuvants may improve the perform ance of **Zampro** However all varieties and cultivars have not been tested with 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 **Zampro** with other products Therefore before using any tank mix (fungicides insecticides herbicides liquid fertilizers biological control products adjuvants and additives) test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application

When an adjuvant (or a specific adjuvant product such as a drift control agent) is to be used with this product BASF recommends the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant

Consult a BASF representative or local agricultural authori ties for more information concerning additives

#### **Mixing Instructions**

Fill the spray tank until it is approximately 1/2 full with clean water Shake the **Zampro** container well then slowly add **Zampro** to the spray tank while agitating Agitation must be engaged before adding the product to obtain a com plete and uniform mixture of **Zampro** 

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

#### **Mixing Order**

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

Make sure each component is thoroughly mixed and sus pended before adding tank mix partners Maintain constant agitation during application See **Table 2 Zampro<sup>®</sup> fungicide Crop-specific Requirements** for more details

#### **Restrictions and Limitations**

- DO NOT exceed the maximum seasonal use rate the maximum rate per application or the total number of applications of Zampro<sup>®</sup> fungicide per season as stated in Table 2 Zampro<sup>®</sup> fungicide Crop-specific Requirements Preharvest Interval (PHI) restrictions are also included in this table
- DO NOT use Zampro in greenhouse or transplant production
- **Tank Mixtures** When tank mixing observe the most restrictive tank mix limitations and precautions of all prod ucts used in the tank mixture
- Crop Rotation Restrictions After making the last Zampro application rotational crops may be planted at the following intervals

#### Anytime

Brassica leafy vegetables Bulb vegetables Cucurbit vegetables Fruiting vegetables Hops Lettuce (head and leaf) Potatoes Tomatoes

#### One month

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

#### Seven months

Alfalfa Beans Clover Corn Peas Rice Sorghum Soybeans

#### **Twelve months**

All other crops

Crop Group**	Maximum Product Rate per Application (fl ozs/A)	Maxımum Number of Sequentıal Applıcatıons	Maxımum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Brassica Leafy Vegetables Group	14	2	42	7 (head and stem) 0 (leafy greens)
Bulb Vegetables Group	14	2	42	0
Cucurbit Vegetables Group	14	2	42	0
Fruiting Vegetables Group	14	2	42	4
Grapes (east of the Rocky Mountains)	14	2	56	28
Hops	14	2	40	7
Lettuce (head and leaf)	14	2	42	0
Potato	14	2	42	4

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\*\* For a complete list of crops within a crop group see Table 2 Zampro® fungicide Crop-specific Requirements

Сгор	Target Disease	Product Use Rate per Application (fl ozs/A)	Maxımum Number of Sequential Applications	Maxımum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Brassica Leafy Vegetables Group	Downy mildew (Peronospora parasitica)	14	2	42	
Head and Stem Broccoli Brussels sprouts Cabbage Cauliflower Cavalo broccolo Chinese broccoli Chinese cabbage (Napa) Chinese mustard Kohirabi					7 (head stem)
<b>Leafy</b> Broccoli raab Chinese cabbage (Bok choy) Collards Kale Mizuna Mustard greens Mustard spinach Rape greens					0 (leafy greens

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**Resistance Management** To limit the potential for development of resistance **DO NOT** make more than three (3) applications of **Zampro** per season

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maxımum Number of Sequential Applications	Maxımum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Bulb Vegetables	Downy mildew	14	2	42	0
Group	(Peronospora				
Garlıc	destructor)				
Garlic great headed					
Leek					
Onion dry bulb					
Onion green					
Onion Welsh					
Shallot					

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**Application Directions** Begin applications of **Zampro** prior to disease development and continue on a 5 day to 7 day interval. Use the shorter interval when disease pressure is high. The addition of a spreading/penetrating adjuvant is recommended to improve disease control performance. See **Additives and Tank Mixing Information** and **Mixing Order** sections.

**Resistance Management** To limit the potential for development of resistance **DO NOT** make more than three (3) applications of **Zampro** per season

Сгор	Target Disease	Product Use Rate per Application (fl ozs/A)	Maxımum Number of Sequential Applications	Maxımum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Cucurbit Vegetables Group	Downy mildew (Pseudoperonospora cubensis)	14	2	42	0
includes all types and hybrids of Cantaloupe Chayote Chinese waxgourd Citron melon Cucumber Edible gourds Gherkin Muskmelon Pumpkin Summer squash Watermelon Winter squash Zucchini Momordica spp (includes Balsam apple Balsam pear	Phytophthora blight or Crown rot (Phytophthora capsici)				

Application Directions Begin applications of Zampro prior to disease development and continue on a 5 day to 7 day interval. Use the shorter interval when disease pressure is high. The addition of a spreading/penetrating adjuvant is recommended to improve disease control performance. See Additives and Tank Mixing Information and Mixing Order sections.

For control of Phytophthora blight or crown rot caused by *Phytophthora capsici* Begin applications of **Zampro** prior to disease development and continue on a 5 day to 7 day interval. Use the shorter interval when disease pressure is high. The addition of a spreading or penetrating adjuvant is recommended to improve disease control.

Apply **Zampro** at planting as a preventive drench treatment for control of the soilborne disease Phytophthora blight caused by *Phytophthora capsici* Thorough coverage and wetting of the root zone and the crown and base of the plant is necessary for best control. Use enough solution to wet the root zone of the plant **Zampro** may be applied at specified rates using sprinkler or drip irrigation (see **Use Precautions for Sprinkler or Drip Irrigation Applications** section)

**Resistance Management** To limit the potential for development of resistance **DO NOT** make more than three (3) applications of **Zampro** per season

#### Table 2 Zampro® fungicide Crop-specific Requirements (continued)

	langiolae orop of				
Сгор	Target Disease	Product Use Rate per Application (fl ozs/A)	Maxımum Number of Sequential Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Fruiting Vegetables	Late blight	14	2	42	4
Group	(Phytophthora				
Eggplant	ınfestans)				
Ground cherry	Phytophthora blight or				
Pepino	Crown rot				
Pepper	(Phytophthora				
(all varieties)	capsici)				
Tomatillo					
Tomato					

Application Directions Begin applications of Zampro prior to disease development and continue on a 5 day to 7 day interval. Use the shorter interval when disease pressure is high. The addition of a spreading/penetrating adjuvant is recommended to improve disease control performance. See Additives and Tank Mixing Information and Mixing Order sections.

Spray volume should be proportional to the amount of plant tissue to be covered such that 100 gallons of spray per acre are used on mature plants

**For control of Phytophthora blight or crown rot caused by** *Phytophthora capsici* Begin applications of **Zampro** prior to disease development and continue on a 5 day to 7 day interval. Use the shorter interval when disease pressure is high. The addition of a spreading or penetrating adjuvant is recommended to improve disease control.

Apply **Zampro** at planting as a preventive drench treatment for control of the soilborne disease Phytophthora blight caused by *Phytophthora capsici* Thorough coverage and wetting of the root zone and the crown and base of the plant is necessary for best control. Use enough solution to wet the root zone of the plant **Zampro** may be applied at specified rates using sprinkler or drip irrigation (see **Use Precautions for Sprinkler or Drip Irrigation Applications** section)

**Resistance Management** To limit the potential for development of resistance **DO NOT** make more than three (3) applications of **Zampro** per season

**DO NOT** make more than two (2) sequential applications of **Zampro** before alternating to a labeled fungicide with a different mode of action

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Sequential Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Grapes (east of Rocky Mountains)	Downy mildew (Plasmopara viticola)	11 to 14	2	56	28

**Application Directions** Begin applications of **Zampro** prior to disease development and continue on a 7 day to 10 day interval. Use the higher rate and shorter interval when disease pressure is high. The addition of a spreading/penetrating adjuvant is recommended to improve disease control performance. See **Additives and Tank Mixing Information** and **Mixing Order** sections.

**Resistance Management** To limit the potential for development of resistance **DO NOT** make more than four (4) applications of **Zampro** per season

Table 2 Zampro <sup>®</sup> fungicide Crop-specific Requirements (continued)						
Сгор	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Sequential Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHi) (days)	
Hops	Downy mildew (Pseudoperonospora humili)	11 to 14	2	40	7	

Application Directions Begin applications of Zampro prior to disease development and continue on a 10 day interval. Use the higher rate when disease pressure is high. The addition of a spreading/penetrating adjuvant is recommended to improve disease control performance. See Additives and Tank Mixing Information and Mixing Order sections.

**Resistance Management** To limit the potential for development of resistance **DO NOT** make more than three (3) applications of **Zampro** per season

**DO NOT** make more than two (2) sequential applications of **Zampro** before alternating to a labeled fungicide with a different mode of action

Сгор	Target Disease	Rate per Application (fl ozs/A)	Number of Sequential Applications	Product Rate per Season (fl ozs/A)	Time from Application to Harvest (PHI) (days)
Lettuce (head and leaf)	Downy mildew (Bremia lactuca)	14	2	42	0
The addition of a sprea	is Begin applications of ding/penetrating adjuva <b>fixing information</b> and	nt is recommended	to improve diseas		

**Resistance Management** To limit the potential for development of resistance **DO NOT** make more than three (3) applications of **Zampro** per season

**DO NOT** make more than two (2) sequential applications of **Zampro** before alternating to a labeled fungicide with a different mode of action

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Sequential Applications	Maxımum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Potato	Late blight (Phytophthora infestans)	11 to 14	2	42	4

**Application Directions** Begin applications of **Zampro** prior to disease development and continue on a 5 day to 7 day interval. Use the higher rate and shorter interval when disease pressure is high. The addition of a spreading/penetrating adjuvant is recommended to improve disease control performance. See **Additives and Tank Mixing Information** and **Mixing Order** sections. Consult local late blight advisory system recommendations to determine the predicted levels of disease pressure and recommended spray interval. Apply spray to obtain thorough and complete plant coverage.

#### May be applied after vine kill

**Resistance Management** To limit the potential for development of resistance **DO NOT** make more than three (3) applications of **Zampro** per season

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

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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.

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