US ENVIRONMENTAL P Office of Chemical Safety an Office of Pesticit Berustration Divi	ROTECTION AGENCY nd Pollution Prevention de Programs sion (7504P)	EPA Reg Number 352-836	Date of Issuance FEB 2 9 2012
Registration Division (7504P) 1200 Pennsylvania Ave , N W Washington, DC 20460 NOTICE OF PESTICIDE <u>X</u> Registration Reregistration Under FIFRA as amended		Term of Issuance Unconditional Name of Pesticide F Dupont™ V Fungicide	l ^{?roduct} ertisan™
Name and Address of Registrant (include ZIP Code) DuPont Crop Protection Stine Haskell Research Center P O Box 30 Newark, DE 19714	Mailed to Richard Landis P O Boz Valdost	d H Collier, Ph D International, Inc x 5126 ta, GA 31603-512	: :6
Note Changes in labeling differing in substanc be submitted to and accepted by the Registrati correspondence on this product always refer to	e from that accepted in on Division prior to use o the above EPA registra	connection with this r of the label in comme ation number	registration must rce In any
On the basis of information furnished be hereby registered under the Federal In Registration is in no way to be construct product by the Agency In order to pro- on his motion, may at any time suspend accordance with the Act The acceptan of a product under this Act is not to be exclusive use of the name or to its use i	by the registrant, the secticide, Fungicide ed as an endorseme tect health and the d or cancel the regis ce of any name in co construed as giving f it has been covere	e above named pes e and Rodenticide A ent or recommenda environment, the A stration of a pestici onnection with the the registrant a rig d by others	ticide is Act Act Administrator de in registration ght to
 This product is registered in accordance 1 Submit and/or cite all data requisec 3(c)(5) when the Agency reconsuch data, and submit acceptable product under FIFRA section 4 	e with FIFRA sectio ired for registration quires all registrants e responses require	on 3(c)(5) provided n of your product u s of similar produc ed for reregistratio	l that you Inder FIFRA ts to submit n of your
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2 Make the following change to the label

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- a Change the product registration number to 'EPA Reg No 352-836"
- 3 Submit one copy of the revised final printed label for the record before the product is released for shipment

Your release for shipment of the product constitutes acceptance of these conditions

A copy of the label stamped 'Accepted" is enclosed for your records

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Tony Kish Product Manager (22) Fungicide Branch Registration Division (7504P)

Enclosure

Label stamped "Accepted" Product Chemistry Review DP373489 Acute Toxicity Review DP373490



DuPontTM VertisanTM

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fungicide

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DuPont[™] Vertisan[™]

fungicide

Tungiciue	GROOT	<u> </u>	FUNCICIDE
Emulsıfiable Concentrate			
Active Ingredient			By Weight
Penthiopyrad			20 6%
Other Ingredients			79 4%
TOTAL			100 0%
Contains 1 67 pounds of penthiopyrad EPA Reg No 352-XXX 8 36 Nonrefillable Container Net Refillable Container Net	FEB 2 9 2012 Under the Federal Insectucide Fungicide, and Rodenticide Act, as amended, for the pestacide registered under EPA Reg. No. 362 - 836	EPA I	Est No
KEEP C	UT OF REACH OF CHILDRE	:N	

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CROUD

FUNCICIDE

WARNING AVISO

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

FIRST AID

IF IN EYES Hold eye open and rinse slowly and gently with water for 15-20 minutes Remove contact lenses, if present after the first 5 minutes, then continue rinsing Call a poison control center or doctor for treatment advice

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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment **For medical emergencies involving this product, call toll-free 1 800-441-3637** See Label for Additional Precautions and Directions for Use

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

Causes substantial but temporary eye injury Do not get in eyes or on clothing Wear protective eyewear (goggles face shield, or safety glasses) Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals May be harmful if swallowed 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)

Mixers, loaders, applicators, and other handlers must wear

- Long-sleeved shirt
- Long pants
- Shoes and socks
- Protective eyewear (goggles face shield, or safety glasses)
- See engineering control statements for additional requirements

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

ENGINEERING CONTROL STATEMENTS

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 thoroughly with soap and water after handling and before eating, drinking chewing gum using tobacco or using the toilet Users should remove and wash contaminated clothing before reuse Users should remove clothing/PPE immediately if pesticide gets inside Then wash thoroughly and put on clean clothing Users should 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

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 washwater or rinsate Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff 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 potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

DIRECTIONS FOR USE

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

AGRICULTURAL USE REQUIREMENTS

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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 the label about personal protective equipment (PPE), and restricted-entry interval and notification to workers (as applicable) The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard

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 State or Tribal agency responsible for pesticide regulation

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil or water is

- Coveralls
- Shoes and socks
- Chemical resistant gloves (made of any waterproof material)
- Protective eyewear (goggles face shield or safety glasses)

DuPontTM VERTISANTM fungicide (i e VERTISAN TM) an emulsifiable concentrate containing penthiopyrad is recommended for use as a spray for the control of many important listed plant diseases

Restrictions

- Use this product only in commercial and farm plantings
- Do not use for home plantings

VERTISAN[™] must be used only in accordance with recommendations on this label

Do not formulate this product into other end-use products without written permission from DuPont

GENERAL INFORMATION

VERTISANTM is a broad-spectrum fungicide, recommended for control of foliar and soil-borne plant diseases and has preventive curative, and locally systemic activity VERTISANTM must be applied in a regularly scheduled protective spray program in rotation with other fungicides. See directions below for specific crop/disease recommendations

VERTISANTM can be applied with ground, air or chemigation equipment, except as otherwise directed, using sufficient water to obtain thorough coverage of plants

Application Volumes

- For conventional ground application, apply a minimum of 15 gallons per acre increasing the spray volume as the plants mature to ensure thorough coverage of foliage
- For air-assisted ground application, apply a minimum of 10 gallons per acre
- For aerial application apply a minimum of 2 gallons per acre (10 gallons per acre for trees and orchards)

Rainfastness VERTISAN[™] rapidly penetrates into plant tissues and is rainfast within 1 hour after application

Not all crops within a crop group, and not all varieties, cultivars or hybrids of crops, have been individually tested for crop safety It is not possible to evaluate for crop safety all applications of

DuPontTM VERTISANTM on all crops within a crop group, on all varieties, cultivars or hybrids of those crops, or under all environmental conditions and growing circumstances To test for crop safety apply the product in accordance with the label instructions to a small area of the target crop to ensure that a phytotoxic response will not occur, especially where the application is a new use of the product by the applicator

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INTEGRATED PEST MANAGEMENT

DuPont recommends the use of Integrated Pest Management (IPM) programs to control pests VERTISANTM may be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural and genetic practices aimed at preventing economic pest damage Application of this product should be based on IPM principles and practices including field scouting or other detection methods correct target pest identification population monitoring and treating when disease forecasting models reach locally determined action levels. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine the appropriate management, cultural practice and treatment threshold levels for the specific crop geography and diseases

RESISTANCE MANAGEMENT

Repeated use of products for control of specific plant pathogens may lead to selection of resistant strains of fungi and result in a reduction of disease control Penthiopyrad, the active ingredient in VERTISANTM, is one of EPA's Target Site of Action Group 7 fungicides (carboxamides) A disease management program that includes rotation and/or tank mixing with non-Group 7 fungicides is essential to reduce the risk of fungicide resistance development. For guidance on a particular crop and disease control situation consult your state extension specialist for official state recommendations.

TANK MIXTURES

Tank mixtures with other fungicides may be used to broaden spectrum and/or manage potential resistance Use tank mixtures with effective fungicides from different target site of action groups (VERTISANTM is in Group 7, carboxamide fungicides) that are registered for the same crop use Apply at least the minimum labeled rate of each fungicide in the tank mix

APPLICATION INFORMATION

Mixing Instructions

1 Fill clean spray tank 1/4 - 1/2 full of water

2 While agitating, add the required amount of VERTISANTM, continuing agitation until the product is completely dispersed

3 Continue filling the tank with agitation adding desired additives or tank mix partners following the sequence listed below in 'tank mixing sequence'

Adjuvants

VERTISANTM fungicide may be used with adjuvants, for example, nonionic surfactants crop oils, methylated seed oils, and blends at typical agricultural use rates for these adjuvants

Compatibility

VERTISANTM is compatible with many commonly used fungicides, liquid fertilizers, herbicides, insecticides and biological control products. However, since the formulations of products are always changing, it is advisable to test the physical compatibility of desired tank mixes and check for adverse effects like settling out or flocculation. To determine the physical compatibility add the recommended proportions of the tank mix products to water mix thoroughly and allow to stand for 20 minutes. If the combination remains mixed or can be re-mixed readily it is considered physically compatible.

The crop safety of all potential tank-mixes, including additives and other pesticides on all crops has not been tested Before applying any tank-mixture not specifically recommended on this label or other DuPont supplemental labeling the safety to the target crop must be confirmed. To test for crop safety apply the combination to a small area of the target crop in accordance with the label instructions to ensure that a phytotoxic response will not occur

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Tank Mixing Sequence

Add different formulation types in the sequence indicated below Allow time for complete mixing and dispersion after addition of each product

- 1 water-soluble bag
- 2 water-dispersible granules
- 3 wettable powders
- 4 water-based suspension concentrates
- 5 water-soluble concentrates
- 6 oil-based suspension concentrates
- 7 emulsifiable concentrates (DuPontTM VERTISANTM)
- 8 adjuvants surfactants, and oils
- 9 soluble fertilizers
- 10 drift retardants

CROP ROTATION

The following list of crops and crop groups may be planted immediately after harvest

Alfalfa, Brassica (cole) leafy vegetables crop group bulb vegetables crop group (onion garlic) Canola cereal grains crop group (barley oats rye sorghum, wheat except rice), corn (all types) cotton cucurbit vegetables crop group (cucumber melons squash), fruiting vegetables crop group (tomato pepper) leafy vegetables crop group (lettuce celery spinach) legume vegetables crop subgroup 6A (edible podded), legume vegetables crop subgroup 6B (succulent shelled) legume vegetables crop subgroup 6C (dried shelled) low-growing berries crop subgroup (strawberries lowbush blueberries) peanuts pome fruits root vegetables crop subgroup (carrot radish, turnip) soybean stone fruits, sugarbeet, sunflower tree nuts crop group (almond filbert pecan pistachio), tuberous and corm vegetables and leaves crop subgroup (potato)

All other crops cannot be planted until 120 days after the last application of VERTISANTM

Crop, Crop Group or Subgroup with examples	Minimum Time from Application to Harvest (PHI days or crop stage)	Maximum Rate per Acre per Application (fl oz product)	Maximum Product per Acre per Year (fl oz product)
Canola	21 days	20 fl oz	41 fl oz
Cereal grains Barley Wheat oats rye	0 day forage and hay Do not apply after flowering (10 5 1)	24 fl oz	48 fl oz
Cereal grains Sorghum	0 day forage 30 days grain and stover	24 fl oz	48 fl oz
Corn	0 day forage 7 days graın and stover	24 fl oz	48 fl oz
Cotton	21 days	24 fl oz	72 fl oz
Legume vegetables Bean pea (subgroup 6C dried shelled except soybean)	0 day vine and hay 21 days seed	20 fl oz	41 fl oz
Soybeans	0 day forage and hay 14 days seed	30 fl oz	61 fl oz
Sugarbeet	7 days 0 day forage	30 fl oz	61 fl oz
Sunflower	14 days	30 fl oz	61 fl oz
Tuberous and corm vegetables and leaves Potato sweet potato yam	7 days	24 fl oz	72 fl oz

Table 1 DuPont[™] VERTISAN[™] fungicide labeled Crop and Crop Groups, Pre-Harvest Intervals, Maximum Single Application Rates, and Total Rates allowed per year

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Soilborne/Seedling Disease Control

VERTISANTM can provide suppression or control of soilborne diseases when applied early in the growing season using specific application methods like in-furrow or band applications shortly after plant emergence

For banded applications, apply VERTISANTM prior to infection as a directed spray to the soil using single or multiple nozzles, adjusted to provide thorough coverage of the targeted foliage and surrounding soil surface Band width should be limited to 6-8 inches or less

For in-furrow application apply VERTISANTM as an in-furrow spray in 3-15 gallons of water at planting Adjust the spray pattern so the spray is directed into the furrow on the seed and surrounding soil. The spray pattern should be a 4- to 8-inch band that is applied to the seed just prior to being covered with soil.

In-Furrow and Banded Application Rates

Rate per							
1000 row feet	Product per Acre (fl oz) ^a						
fl oz prod/ 1000 ft row	22 " rows	30 " rows	32 " rows	34 " rows	36 " rows	38 " rows	40 " rows
07	16 7	12 2	114	10 9	10 2	96	92
12	28 6 ^b	20 9	196	18 5	17 4	16 5	15 7
16		27 9 ^c	26 1 ^d	24 6 ^e	23 0	22 0	21 1

^a Consult the maximum rate per acre allowed for the crop and do not exceed that rate when using this application method ^b In 22 inch rows the highest rate for crops with 24 fl oz/acre maximums is 1 0 fl oz/1000 ft row and for crops with 30 fl oz/acre maximums is 1 26 fl oz/1000 ft row

^c In 30 inch rows the highest rate for crops with 24 fl oz/acre maximums is 1 38 fl oz/1000 ft row

^d In 32 inch rows the highest rate for crops with 24 fl oz/acre maximums is 1 47 fl oz/1000 ft row

^e In 34 inch rows the highest rate for crops with 24 fl oz/acre maximums is 1 56 fl oz/1000 ft row

USE RATES AND APPLICATION INSTRUCTIONS

Crop/Crop Group	Disease Controlled or Suppressed	Rate fl oz/acre	Comments	
Canola	Alternaria blackspot (Alternaria spp)	14 to 20 fl oz	Begin applications prior to disease development and	
	Sclerotinia stem rot white mold (Sclerotinia spp)	16 to 20 fl oz	continue on a 7 to 14 day interval Use higher rate and shorter interval when disease pressure is high	
			Sclerotinia stem rot Begin application at 20 50% bloom prior to disease development and continue on a 7 to 14 day interval Use higher rate and shorter interval when disease pressure is high	
Make no more than 2 sequential applications of DuPont [™] VERTISAN [™] fungicide before switching to a fungicide with a				

different mode of action Minimum time (PHI) between application and harvest is 21 days Do not exceed 41 fl oz/acre per year

Cereal grains

Use directions for specific cereal grains are provided below Cereal grains may be used for grazing forage and/or hay within 0 days after the last application

Barley (Rhynchosporium secalis) Spot blotch (Cochliobolus sativus)	14 to 24 fl oz Begin applications prior to disease development and continue on a 7 to 14 day interval depending on the targeted disease Use higher rate and shorter interval when disease pressure is high
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Make no more than 2 sequential applications of VERTISAN[™] before switching to a fungicide with a different mode of action Do not apply after flowering (Feekes 10 5 1) Do not exceed 48 fl oz/acre per year

Millet pearl millet proso Sorghum (milo) sorghum spp (sudangrass and hybrids)	Rust common (Puccinia sorghi)	10 to 24 fl oz	Begin applications prior to disease development and continue on a 7 to 14 day interval Use higher rate and shorter interval when disease
			pressure is high
Make no more than 2 sequential action Minimum time (PHI) bet	applications of VERTISAN™ before swite ween application and grain and stover har	ching to a fungic vest is 30 days	ide with a different mode of Do not exceed 48 fl oz/acre per
vear			

Crop/Crop Group	Disease Controlled or Suppressed	Rate fl oz/acre	Comments
Wheat Let rye (S) oats Ru buckwheat (P) teosinte Ru triticale (P) Ta (P)	Leaf and glume blotch (Stagonospora spp Septoria spp) Rust brown leaf (Puccinia recondita f sp tritici) Rust black stem (Puccinia graminis f sp tritici) Rust stripe (Puccinia striiformis)	10 to 24 fl oz	Begin applications prior to disease development and continue on a 7 to 14 day interval depending on the targeted disease Use higher rate and shorter interval when disease pressure is high To optimize yields in cereals 1
	Tan spot (Pyrenophora tritici repentis)	16 to 24 fl oz	is important to protect the flag leaf from foliar diseases For
	Disease suppression Powdery mildew (<i>Erysiphe graminis f sp tritici</i>) Scab (<i>Fusarium</i> spp)	10 to 24 fl oz	optimizing yield and flag leaf disease control apply DuPont [™] VERTISAN [™] fungicide at Feekes 9 flag leaf out
Make no more than 2 sequents mode of action Do not apply after flowering (al applications of VERTISAN [™] fungicide b Feekes 10 5 1) Do not exceed 48 fl oz/acre	efore switching (per year	to a fungicide with a different

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Corn, field corn sweet corn seed popcorn	Anthracnose leaf blight (Colletotrichum graminicola) Gray leaf spot (Cercospora zeae maydis) Leaf spots (Alternaria spp) Northern corn leaf blight	10 to 24 fl oz	Begin applications prior to disease development and continue on a 7 to 14 day interval Use higher rate and shorter interval when disease pressure is high
	(Exserohilum turcicum)		
	Northern corn leaf spot		
	(Bipolaris zeicola)		
	Rusts		
	(Puccinia spp) Southern corn leaf blight (Bipolaris maydis)		
	Physoderma brown spot (Physoderma maydıs)	16 to 24 fl oz	

Make no more than 2 sequential applications of VERTISAN[™] before switching to a fungicide with a different mode of action Minimum time (PHI) between application and grain and stover harvest is 7 days for corn Corn may be used for grazing or forage within 0 days after the last application Do not exceed 48 fl oz/acre per year

Cotton	Boll Rot (Diplodia Fusarium) Foliar disease complex Alternaria leaf and stem spots (Alternaria spp) Cercospora leaf spot (Cercospora spp) Stemphylium leaf spot (Stemphylium spp) Hardlock (Fusarium spp)	16 to 24 fl oz	Begin applications prior to disease development and continue on a 7 to 14 day interval Use higher rate and shorter interval when disease pressure is high
	Soil borne diseases Seedling and root rot (<i>Rhizoctonia solani</i>)	0 7 to 1 6 fl oz/1000 row ft	At plant in furrow transplant seedling application Maximum rate per acre per application is 24 fl oz See soil borne disease section instructions
Make no more than 2 sequential action Minimum time (PHI) betw	applications of VERTISAN TM before swit ween application and harvest is 21 days	ching to a fungic Do not exceed 72	ide with a different mode of fl oz/acre per year

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Crop/Crop Group	Disease Controlled or Suppressed	Rate fl oz/acre	Comments
Legume vegetables Subgroup 6C dried shelled beans and peas, except soybeans Dried cultivars of bean (Lupinus spp) (includes grain lupin sweet lupin white lupin white sweet lupin) (Phaseolus spp) (includes field bean kidney bean lima bean (dry) navy bean pinto bean) tepary bean Bean (Vigna spp) (includes adzuki bean blackeyed pea catjang cowpea Crowder pea moth bean mung bean rice bean southern pea urd bean) broad bean (dry)	Alternaria blight leaf spot (Alternaria spp) Angular leaf spot (Phaeoisariopsis griseola) Anthracnose (Colletotrichum lindemuthianum) Ascochyta blight leaf spot (Ascochyta spp) Cercospora leaf spot (Cercospora spp) Gray mold (Botrytis cinerea) Powdery mildew (Erysiphe spp) Rust (Uromyces spp Phakopsora spp) Septoria blotch (Septoria spp)	14 to 20 fl oz	Begin applications prior to disease development and continue on a 7 to 14 day interval Use higher rate and shorter interval when disease pressure is high
lablab bean lentil pea (Pisum spp) (includes field pea) pigeon pea	Sclerotinia rot white mold (Sclerotinia spp)	16 to 20 fl oz	Make initial preventive application at beginning bloom and follow with 2nd application 7 10 days later at full bloom

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Make no more than 2 sequential applications of DuPontTM VERTISANTM fungicide before switching to a fungicide with a different mode of action Vines may be grazed or used for hay 0 days after application Minimum time (PHI) between application and harvest of seed is 21 days Do not exceed 41 fl oz/acre per year

Soybean	Anthracnose (Colletotrichum truncatum) Alternaria leaf spot (Alternaria spp) Brown Spot (Septoria glycines) Cercospora blight and leaf spot (Cercospora kikuchu) Frogeye leaf spot (Cercospora sojina) Pod and stem blight (Diaporthe phaseolum) Rust (Puccinia spp Phakospora spp) Target Spot (Corynespora cassucola)	10 to 30 fl oz	Begin applications prior to disease development and continue on a 7 to 14 day interval Use higher rate and shorter interval when disease pressure is high For white mold make initial preventive application at 100% bloom (1 flower blooming on all plants) and follow with 2nd application 7 10 days later at full bloom
	Sclerotinia stem rot (white mold) (Sclerotinia sclerotiorum)	16 to 30 fl oz	

Make no more than 2 sequential applications of VERTISANTM before switching to a fungicide with a different mode of action Do not use soybean forage or hay for livestock feed Minimum time (PHI) between application and harvest of seed is 14 days Do not exceed 61 fl oz/acre per year

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Crop/Crop Group	Disease Controlled or Suppressed	Rate fl oz/acre	Comments
Sugarbeet	Cercospora leaf spot (Cercospora beticola) Powdery mildew (Erysiphe betae) Rust (Uromyces betae)	14 to 30 fl oz	Begin applications prior to disease development and continue on a 7 to 14 day interval Use higher rate and shorter interval when disease pressure is high
	Soil borne diseases (Rhizoctonia spp)	0 7 to 1 6 fl oz/1000 row ft	At plant in furrow transplant seedling application Maximum rate per acre per application is 30 fl oz See soil borne disease section instructions
Make no more than 2 sequentia different mode of action Sugar (PHI) between application and	al applications of DuPont [™] VERTISAN [™] rbeet tops may be used for grazing or forage harvest is 7 days Do not exceed 61 fl oz/a	fungicide before : e 0 days after the acre per year	switching to a fungicide with a last application Minimum time
Sunflower	Alternaria leaf spot (Alternaria spp) Powdery mildew (Erysiphe cichoracearum) Rust (Puccinia helianthi Uromyces spp) Septoria leaf spot (Septoria spp) Sclerotinia stem rot	10 to 30 fl oz 16 to 30 fl oz	Begin applications prior to disease development and continue on a 7 to 14 day interval Use higher rate and shorter interval when disease pressure is high
Make no more than 2 sequentia action Minimum time (PHI) b	al applications of VERTISAN [™] before swin etween application and harvest is 14 days	tching to a fungic Do not exceed 61	Ide with a different mode of floz/acre per year
Tuberous and corm vegetables and leaves Potato Arracacha arrowroot artichoke Chinese artichoke Jerusalem canna edible cassava bitter and sweet chayote (root) chufa dasheen (taro) ginger leren sweet potato tanier turmenc yam bean yam true	s Alternaria early blight and brown spot (Alternaria solani Alternaria alternata) Gray mold (Botrytis cinerea) Powdery mildew (Erysiphe spp)	10 to 24 fl oz	Begin applications prior to disease development and continue on a 7 to 14 day interval Use higher rate and shorter interval when disease pressure is high
	Black dot (Colletotrichum coccodes)	14 to 24 fl oz	
	Disease suppression White mold (Sclerotinia sclerotiorum)	14 to 24 fl oz	Make initial application at 100% full bloom of the primary inflorescence or prior to row closure and then again 14 days later
	Soil borne diseases Rhizoctonia stem canker and black scurf (<i>Rhizoctonia solani</i>)	0 7 to 1 6 fl oz/1000 row ft	At plant in furrow transplant seedling application Maximum rate per acre per application is 24 fl oz See soil borne disease section instructions
Make no more than 2 sequential applications of VERTISAN [™] before switching to a fungicide with a different mode of action Minimum time (PHI) between application and harvest is 7 days Do not exceed 72 fl oz/acre per year			

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Chemigation

Apply DuPont[™] VERTISAN[™] fungicide only through sprinkler irrigation systems (such as center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun solid set or hand move irrigation systems)

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

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

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 systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) 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.

3 The pesticide injection pipeline must contain a functional automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump

4 The pesticide injection pipeline must 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

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 fitted with a system interlock

Specific Instructions for Sprinkler Irrigation Systems

1 The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow

2 The pesticide injection pipeline must contain a functional automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump

3 The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down

4 The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops

5 The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected

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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 Good agitation is required in the injection tank

8 In moving systems, apply specified dosage of DuPontTM VERTISANTM fungicide as a continuous injection. In nonmoving systems inject VERTISANTM for 15 to 30 minutes at end of cycle. Use the least amount of water possible consistent with uniform coverage.

9 Mix the amount of VERTISANTM needed for acreage to be treated into the quantity of water determined during prior calibration. For moving systems inject into the system continuously for one complete revolution of the field. For nonmoving systems inject into system for the time established during calibration.

10 Stop injection equipment after treatment is completed and continue to operate irrigation equipment until all VERTISANTM is flushed from system

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift The applicator is responsible for considering all these factors when making application decisions

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets (>150 - 200 microns) The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control The presence of sensitive species nearby, the environmental conditions and pest pressure may affect how an applicator balances drift control and coverage 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 sections of this label

Controlling Droplet Size - General Techniques

• **Volume** - Use high flow rate nozzles to apply the highest practical spray volume Nozzles with higher rated flows produce larger droplets

• **Pressure** - Use the lower spray pressures recommended for the nozzle Higher pressure reduces droplet size and does not improve canopy penetration WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE

• 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

Controlling Droplet Size - Aircraft

• Number of Nozzles - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage

• Nozzle Orientation - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations

• Nozzle Type - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types

BOOM LENGTH AND HEIGHT

• Boom Length (aircraft) - The boom length should not exceed 3/4 of the wing length using shorter booms decreases drift potential. For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.

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• Boom Height (aircraft) - Application more than 10 ft above the canopy increases the potential for spray drift

• **Boom Height (ground)** Setting the boom at the lowest height which provides uniform coverage reduces the exposure of droplets to evaporation and wind The boom should remain level with the crop and have minimal bounce

WIND

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph However many factors including droplet size and equipment type determine drift potential at any given wind speed AVOID GUSTY OR WINDLESS CONDITIONS

Note Local terrain can influence wind patterns Every applicator should be familiar with local wind patterns and how they affect spray drift

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation

SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion Surface inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud Surface inversions are characterized by increasing temperature 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 present inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates a surface inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product

AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring

Note Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended

SENSITIVE AREAS

This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e g residential areas bodies of water, known habitat for threatened or endangered species non-target crops) is minimal (e g when wind is blowing away from the sensitive areas)

STORAGE AND DISPOSAL

Do not contaminate water food or feed by storage and disposal

PESTICIDE STORAGE Keep container closed when not in use Always store pesticides in the original container only away from other pesticides food pet food feed seed fertilizers and veterinary supplies. If a leaky container must be contained within another mark the outer container to identify the contents. Storage areas must be locked and secure from vandalism with precautionary signs posted. The storage area must be dry well lit and well ventilated Keep pesticide storage areas clean. Clean up any spills promptly. Protect pesticide containers from extreme heat and cold. Store herbicides insecticides and fungicides in separate areas within the storage unit. Place liquid formulations on lower shelves and dry formulations above. Maintaining a spill kit and fire extinguisher on hand and having emergency phone numbers posted will allow you to be prepared for emergencies. If spill cleanup PPE is stored nearby but outside the pesticide storage area it will be accessible when needed

PESTICIDE DISPOSAL Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility

CONTAINER HANDLING

Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation

Nonrefillable Rigid Plastic and Metal Containers (Capacity Equal to or Less Than 5 Gallons) Nonrefillable container Do not reuse or refill this container Triple rinse container (or equivalent) promptly after emptying Triple rinse as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container 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 two more times Then for Plastic Containers offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances. For Metal Containers offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

Nonrefillable Rigid Plastic and Metal Containers (Capacity Greater Than 5 Gallons) Nonrefillable container Do not reuse or refill this container Triple rinse container (or equivalent) promptly after emptying Triple rinse 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 two more times Then for Plastic Containers offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances For for Metal Containers offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities

Nonrefillable Rigid Plastic and Metal Containers, e g, Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down) Nonrefillable container Do not reuse or refill this container Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure spray duration and/or spray volume. If the manufacturer s instructions are not available pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then for Plastic Containers offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration. For Metal Containers offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

All Refillable Containers Refillable container *Refilling Container* Refill this container with DuPontTM VERTISANTM fungicide containing penthiopyrad only Do not reuse this container for any other purpose Cleaning before refilling is the responsibility of the refiller Prior to refilling inspect carefully for damage such as cracks punctures abrasions worn out threads and closure devices If damage is found do not use container contact DuPont at the number below for instructions Check for leaks after refilling and before transporting If leaks are found do not reuse or transport container contact DuPont at the number below for instructions Disposing of Container Do not reuse this container for any other purpose other than refilling (see preceding) Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal use the following pressure rinsing procedure Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure spray duration and/or spray volume If the manufacturer s instructions are not available pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume Drain pour or pump rinsate into application equipment or rinsate collection system Repeat this pressure rinsing procedure two more times Then for Plastic Containers offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration Do not burn unless allowed by state and local ordinances For Metal Containers offer for recycling If available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities

Do not transport if container is damaged or leaking. If the container is damaged leaking or obsolete or in the event of a major spill fire or other emergency contact DuPont at 1 800 441 3637 day or night.

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