

Vegetable and Herb Disease Control Products for Texas

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VEGETABLE AND HERB DISEASE CONTROL PRODUCTS FOR TEXAS

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PREFACE

This publication was prepared for agricultural county Extension agents in Texas, growers, consultants, agribusiness personnel, and others. It provides information about which pesticides are labeled for vegetable and herb disease control. This publication also is available on the Internet at:

<http://plantpathology.tamu.edu> and <http://agpublications.tamu.edu/pubs/eplant>.

Product listings were selected on the basis of registration with the Environmental Protection Agency (EPA) and availability in Texas. Products listed may not be labeled in other states and products not listed here may be available elsewhere. Disease control efficacy, costs and handler safety vary among products labeled for the same crop and same disease, but no attempt was made to summarize those comparisons.

Botanical (*Latin*) names for plants and most pathogens/problems have been listed in italics after the plant common name and disease name if there was reasonable certainty about the intent of the label. Crop codes were assigned to crops listed on pesticide labels according to: *G. M. Markle, J. J. Baron, and B. A. Schneider. 1998. Food and Feed Crops of the United States. Second ed., Meister Publishing Co., Willoughby, OH, 517 pages.* Disease codes were assigned to diseases listed on pesticide labels according to the plant disease compendia series from APS Press, St. Paul, MN, and other sources. Contact the product manufacturer if name clarification is needed.

Vegetable and herb pesticides must be used according to directions on the label attached to the container or package. This publication has been carefully checked with product labels. However, registrations change regularly. All information was current as of November 1, 1999, to the knowledge of the authors.

Current status of chemical clearances can be obtained from manufacturers whose addresses and telephone numbers are listed in the back of this bulletin, and from the Texas Department of Agriculture, Pesticide Product Registration, Austin (512-463-7422, 512-463-7407). TDA's Internet site is: <http://www.agr.state.tx.us/pesticide/index.htm>.

This publication was prepared for informational and educational purposes only. The mention of products does not guarantee product quality or effectiveness, nor does it imply approval of any product to the exclusion of others that may be equally suitable.

DISEASE CONTROL STRATEGIES

Plant health protection chemicals have the potential to be very important in the production of healthy and profitable crops.

It is important to identify past, current, and potential disease problems to be able to select cost effective cultural and chemical alternatives for disease prevention and control. For assistance with plant disease identification, contact a county Extension agent for agriculture and integrated pest management (IPM), an Extension plant pathologist, or the **Texas Plant Disease Diagnostic Laboratory** at College Station. The laboratory address is Room 101, L. F. Peterson Building, Texas A&M University, College Station 77843-2132, telephone 409-845-8033, FAX 409-845-6499.

Plant health protection chemicals are most effective when used with certain cultural practices. Crop rotation, ideal planting date, site selection, soil preparation, crop residue management, irrigation, resistant varieties, plant population density, and other practices often reduce pathogen populations and/or disease losses.

For additional information on cultural control methods, consult publications on vegetable and herb diseases, the *Texas Plant Diseases Handbook*, and related Internet sites linked to this site:

<http://plantpathology.tamu.edu/Textlab/table.html#Vegetable>.

Most vegetable and herb diseases are more easily managed with preventative measures than with treatments that begin after diseases have started. Pesticides may need to be applied just before disease is expected. An understanding of disease development is required to ensure proper timing and treatment frequency.

Most plant diseases are strongly influenced by weather conditions. There are several commercial sources of weather monitoring equipment and compatible computer software for selected vegetable crops that are designed as treatment decision aids. Personnel with the Texas Agricultural Extension Service can provide more information.

ABBREVIATIONS FOR MEASURE AND TIME

d	day
gal	gallon
hr	hour
lb	pound
min	minute
oz	ounce
pt	pint
qt	quart
sec	second
Tbsp	tablespoon
tsp	teaspoon

OTHER ABBREVIATIONS AND DEFINITIONS

- a.i. Active Ingredient - The percentage of a formulation that has pesticide activity. Percent values were rounded to two significant digits.
- copper Expressed as percent metallic equivalent; active ingredient may be copper hydroxide, basic copper sulfate, copper salts, or other.

D Dust, Dusting - A dust is ready to use when purchased and contains an active ingredient and diluent.

E, EC, ES Emulsifiable, Emulsifiable Concentrates, Emulsifiable Solution - A formulation that contains an active ingredient, a solvent, and an emulsifier.

F Flowable - Liquid formulations that are suspensions of the active ingredient in a diluent.

G, GR Granular, Granules - Coarse textured pesticide formulations that are applied directly to the soil. They contain an active ingredient and a diluent. The diluent is coarse or granulated. The active ingredient is absorbed or coats the granule.

int. Interval - Time between applications - Shorter intervals are generally used during periods of weather that favor disease development or on highly susceptible plant varieties. Longer intervals are suggested during periods of low humidity or on varieties that have a high level of disease resistance.

label The legal document attached to each pesticide container with information on the product, safety, crop use, and action to take in case of emergency. Contact the manufacturer or the authors of this bulletin if you need to study a specific label before a purchase.

L, LS Liquids, Liquid Solution - A liquid material that contains an active ingredient and a diluent.

rate Rates were not included in this bulletin to conserve space and to encourage growers to read and follow actual label directions. A range of rates are allowed for most products. Lower rates are generally used during periods with low humidity and low leaf wetness hours, or on varieties with partial disease resistance. Higher rates are used on plants that are very susceptible, during weather that favors disease development, or after the pathogen has become established on a crop.

Reentry time Amount of time after a pesticide application before one can safely reenter the treated area without wearing protective clothing. Reentry times are not included in this publication but are 24 hours in Texas unless specified otherwise on the label.

seed treatment Biologically active chemicals, antagonistic microorganisms, or symbiotic microorganisms applied to the seed before planting. Three types of chemicals are marketed: nonsystemic (thiram, captan, quintozene (PCNB)), locally systemic (fludioxonil, thiabendazole), and systemic (carboxin, metalaxyl, mefenoxam, triazoles).

seedling disease	Seed rots, preemergence damping-off, postemergence damping-off, and/or root damage.
WDG, WDS, WSP, WG, DF	Water Dispersible Granule, Water Dispersible Suspension, Water Soluble Powder, Wetttable Granule, and Dry Flowable, respectively.
WP, W	Wetttable powder, Wetttable - Dry powder formulation that easily mixes with water. Wetttable powders contain an active ingredient, an emulsifier and a diluent.
WSB	Water Soluble Bag.
zinc	Expressed as metallic equivalent; active ingredient may vary.

HOW TO USE THIS BULLETIN

Locate the vegetable/herb section of interest using the Contents or Index. Some sections have a single crop (for example, **Asparagus**, pages 1-2). Other sections include several related crops (for example, **Crucifers**, pages 11-17). Related vegetables/herbs in a section were assigned a number (for example, Crucifers: **2** for broccoli, **6** for cabbage). Diseases for each vegetable/herb section were assigned a lower case letter (for example, Crucifers: **y** for white mold caused by *Sclerotinia* fungus and **z** for white rust caused by *Albugo* fungus).

For each vegetable/herb group, disease control pesticides were listed under subheadings of **Field Soil Treatment**, **Seed Treatment**, **Field Foliar Treatment**, **Greenhouse Treatment**, **Postharvest Treatment**, or **Structure/Vehicle Treatment**.

Products were listed in the first column by active ingredient and concentration (%). The trade name in **bold type** and company name in regular type were placed in the second column.

Each vegetable/herb was assigned a number code, and each disease was assigned a letter code. These codes were placed in brackets, [] after the manufacturer name in the second column and/or in the **Remarks** (third) column. In the third column, trade names were sometimes abbreviated in parentheses, (), to indicate unique signal words (**CAUTION**, **WARNING**, **DANGER**) preharvest intervals ("+"), maximum applications/product amounts ("*"), and treatment intervals.

PESTICIDES FOR VEGETABLE AND HERB DISEASE CONTROL IN TEXAS

ASPARAGUS LILIACEAE <i>Asparagus officinalis</i>		
	Disease Codes	
	w - Crown rot and spear rot (<i>Phytophthora</i>) x - Leaf spot (<i>Cercospora asparagi</i>) y - Root rot (<i>Fusarium oxysporum</i> , <i>F. asparagi</i>) z - Rust (<i>Puccinia asparagi</i>)	
Ingredient	Trade Name&	Remarks&, #
A. Field Soil Treatment (see also pages 24-25)		
mefenoxam 48%	Ridomil Gold EC Novartis [w]	WARNING; 1+
B. Crown (planting stock) and Seed Treatment(see also page 25)		
sodium hypo-chlorite 5.3%	Clorox Clorox Company [y]	WARNING; 1*; seed Treatment; 40 min agitation, air dry
mancozeb, maneb 80%	Manzate 80WP Griffin; Dithane M-45 , WSP Rohm and Haas [w]	CAUTION; 5 min crown dip
75%	Manzate 75DF Griffin; Dithane DF Rohm and Haas [w]	CAUTION; 5 min crown dip
37%	Dithane ST, F-45 , Rohm and Haas; Manex II F Griffin [w]	CAUTION; 5 min crown dip
C. Field Foliar Treatment (see also page 25)		
mancozeb, maneb 80%	Manzate 80WP Griffin; Dithane M-45 , WSP Rohm and Haas; Penncozeb 80WP Elf Atochem [x,z]	CAUTION; 180+; 8 lb*; 10 d int.; on ferns after harvest
75%	Penncozeb 75DF Elf Atochem; Manzate 75DF Griffin; Dithane DF Rohm and Haas [x,z]	CAUTION; 180+; (M75) 8 lb*; (P75,DF) 8.5 lb*; 10 d int.; after harvest
37%	Dithane F-45 Rohm and Haas; Manex II F Griffin [x,z]	CAUTION; 180+; 6.4 qt*; 10 d int.; after harvest
sulfur + copper 50+8.4%	Top Cop With Sulfur F Stoller [z]	CAUTION; 0+; 10 d int.
sulfur 99%	Commercial D Sulphur International Sulphur [z]	CAUTION; after cutting stops; 7-10 d int.
98%	D Sulfur Wilbur-Ellis [z]	CAUTION; after cutting stops; 7-10 d int.
94%	Superfine W Sulphur International Sulphur [z]	CAUTION; after cutting stops; 7-14 d int.

& Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
 # Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
 + Number of days from the last application until harvest (preharvest interval).
 * Maximum number of applications or maximum product amount per acre per season.

92%	Golden-Dew Wilbur-Ellis [z]	CAUTION; 7-10 d (spear), 14-21 d (fern) int.
90%	90% Sulfur D Helena [z]	CAUTION; after cutting stops
	Sulfur 90W Drexel [z]	CAUTION; after cutting stops; 7-10 d (spear), 14-21 d (fern) int.
85%	Ben-Sul 85 Wilbur-Ellis [z]	CAUTION; after cutting stops; 7-10 d int.
80%	Kumulus DF BASF; Sulfur DF Wilbur-Ellis; Thiolux DF Micronized Sulfur Platte [z]	CAUTION; after cutting stops; 7-10 d int.
60%	Ben-Sul 60 D Wilbur-Ellis [z]	CAUTION; after cutting stops; 7-10 d int.
52%	Sulfur F 6 Platte; Sulfur 6L Micro Flo; Suffa Drexel [z]	CAUTION; after cutting stops; 7-10 d int.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [z]	CAUTION; see Greenhouse Trt.

D. Greenhouse Treatment (see also pages 25-26)

paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [z]	CAUTION; see Field Foliar Trt.
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BEET and SWISS CHARD CHENOPODIACEAE

Crop Codes	Disease Codes
1 - Beet, table (garden, <i>Beta vulgaris</i>) 2 - Beet, greens (<i>B. vulgaris</i>) 3 - Chard, Swiss (<i>B. vulgaris</i> subsp. <i>cicla</i>)	o - Bacterial ice nucleation p - Black rot (<i>Xanthomonas</i>) q - (<i>Pythium</i>) r - Damping-off (seedling blight, seedling disease, seed rot, seed decay; <i>Rhizoctonia</i> , other soil and seed fungi) s - Downy mildew (<i>Peronospora farinosa</i> f. sp. <i>betae</i>) t - Leaf blight (black spots, angular spot; <i>Alternaria alternata</i> , <i>A. brassicae</i>) u - Leaf spot (<i>Cercospora beticola</i>) v - Phytophthora w - Plant parasitic nematodes (see label for species) x - Powdery mildew (<i>Erysiphe polygoni</i>) y - Seed storage loss z - Viruses (see label for species)

A. Field Soil Treatment (see also pages 24-25)

mefenoxam	48%	Ridomil Gold EC Novartis [1,q,v][3,q]	WARNING; 1*
	25%	Ultra Flourish Agtrol [3,q]	WARNING; 1*
	2.5%	Ridomil Gold GR Novartis [3,q]	CAUTION; 1*

B. Seed Treatment (see also page 25)

captan	75%	Captan 75 Slurry, WDG, D Wilbur-Ellis [1-3,q,r]	DANGER
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Ingredient	Trade Name&	Remarks&, #
38%	Captan 4000 Wilbur-Ellis [1,3,q,r,y]; Captan 400 Gustafson [1,3,q,r,v]	DANGER
29%	Captan 30-DD Gustafson [1,3,q,r,v]	DANGER
fludioxonil 40%	Maxim 4FS Novartis [1,3,q,r,y]	CAUTION
thiram 50%	Thiram 50WP Dyed Gustafson [1,3,q,r]	CAUTION
mefenoxam 32%	Apron XL LS Novartis [1,q]	WARNING
metalaxyl 28%	Allegiance-FL Gustafson; Apron F Wilbur-Ellis [1,q]	CAUTION ; Apron F commercial seed treater only
C. Field Foliar Treatment (see also page 25)		
fatty acids 49%	M-Pede Mycogen [1-3,x]	WARNING ; 0+; 7-14 d int.; see Greenhouse Trt.
fosetyl-aluminum 80%	Aliette WDG, WSP Rhône-Poulenc [3,s]	CAUTION ; 3+; 7*; 7-21 d int.; no copper mixture
copper 53%	Basicop WP Griffin [1,2,s]; Basic Copper 53 Micro Flo ; Basic Copper Sulfate Drexel [1,2,s-u]	WARNING ; 0+; 7-10 d int.
	Microspense COC 53 WP Micro Flo [1,2,o,s-u]	DANGER ; 0+; 7-10 d int.
50%	C-O-C-S WDG Platte [1,s,u]; Kocide 101 WP Griffin; Nu-Cop 50DF Micro Flo [1,o,u]; Champion WP Agtrol [1,2,o,u]	WARNING (COC); DANGER (Ch,NC, Ko); 0+; (COC) 7-10 d, (Ch) 7-14 d, (NC,Ko) 10-14 d int.
40%	Kocide DF Griffin [1,o,u] [2,o,p,s,t]	DANGER ; 0+; [1] 10-14 d; [2] 7-10 d int.
35%	Kocide 2000 Griffin [1,o,u]	DANGER ; 0+; 10-14 d int.
30%	Top Cop Tri-Basic Stoller [1,2,o,s-u]	CAUTION ; 0+; 7-10 d int.
24%	Champ Formula 2 F Agtrol; Kocide 4.5LF Griffin [1,2,o,u]	CAUTION ; 0+; 10-14 d int.; with agricultural spray oil
	3 Lb Copper F Helena [1,o,u]	DANGER ; 0+; 10-14 d int.
	KOP 300 F Copper F Drexel [1,2,s,u]	WARNING ; 0+; 7-10 d int.
sulfur + copper 50+8.4%	Top Cop With Sulfur F Stoller [1,2,s,x]	CAUTION ; 0+; 7-14 d int.
sulfur 99%	Commercial D Sulphur International Sulphur [1,x]	CAUTION ; 0+; 10-30 d int.
98%	D Sulfur Wilbur-Ellis [1,2,x]	CAUTION ; 0+; 7-10 d int.
94%	Superfine W Sulphur International Sulphur [1,x]	CAUTION ; 0+; as needed

& Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

92%	Golden-Dew Wilbur-Ellis [1,x]	CAUTION; 0+; 14 d int.
90%	Microperse WS Micro Flo; Sulfur 90W Drexel [1,x]	CAUTION; 0+; (MWS) 18 d, (S90) 10-30 d int.
80%	Kumulus DF BASF; Sulfur DF Wilbur-Ellis; Thiolux DF Micronized Sulfur Platte [1,x]	CAUTION; 0+; (KDF,SDF) as needed; (TMS) 10-30 d int.
53%	EM-53 L Sulphur International Sulphur [1,x]	CAUTION; 0+; 10-30 d int.
52%	Suffa Drexel; Sulfur 6L Micro Flo, Riverside/Terra [1,x]	CAUTION; 0+; (S6L) 18 d, (Suffa) 10-30 d int.
fosetyl-aluminum 80%	Aliette WDG, WSP Rhône-Poulenc [3,s]	CAUTION; 3+; 7*; 7-21 d int.; no copper mixture
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [1,2,t,x,z]	CAUTION; see Greenhouse Trt.

D. Greenhouse Treatment (see also pages 25-26))

fatty acids 49%	M-Pede Mycogen [1-3,x]	WARNING; 0+; 7-14 d int.; see Field Foliar Trt.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [1,2,t,x,z]	CAUTION; see Field Foliar Trt.

CARROT **APIACEAE** *Daucus carota* subsp. *sativus*

Disease Codes

- o** - Bacterial ice nucleation
- p** - Black crown rot (*Alternaria radicina*)
- q** - Cavity spot (*Pythium*)
- r** - Damping-off (*Phytophthora, Pythium*)
- s** - Damping-off (seedling blight, seedling disease, seed rot, seed decay; *Rhizoctonia*, other soil and seed fungi)
- t** - Foliar disease (Oomycete fungi)
- u** - Gray mold (*Botrytis cinerea*)
- v** - Leaf blight (late blight; *Alternaria dauci*)
- w** - Leaf spot (carrot blight, early blight; *Cercospora carotae*)
- x** - Plant parasitic nematodes (see label for species)
- y** - Powdery mildew (*Erysiphe polygoni*)
- z** - White mold (white rot; *Sclerotinia sclerotiorum*)

A. Field Soil Treatment (see also pages 24-25)

mefenoxam 48%	Ridomil Gold EC Novartis [q,r]	WARNING; 1*
oxamyl 24%	Vydate L DuPont [x]	DANGER; 14+; 4 gal*

B. Seed Treatment (see also page 25)

fludioxonil 40%	Maxim 4FS Novartis [r,s]	CAUTION
metalaxyl 28%	Allegiance-FL Gustafson [r]	WARNING
mefenoxam 32%	Apron XL LS Novartis [r]	WARNING
captan + lindane 12+25%	Seed Mate Isotex Seed Treater F Loveland Industries [r,s]	DANGER

Ingredient		Trade Name&	Remarks&,#
captan	75%	Captan 75 D, Slurry, WDG Wilbur-Ellis [r,s]	DANGER
thiram	50%	Thiram 50WP Dyed Gustafson [r,s]	CAUTION
C. Field Foliar Treatment (see also page 25)			
<i>Ampelomyces quisqualis</i>	58%	AQ 10 Ecogen [y]	CAUTION; 0+; 7-14 d int.; see Greenhouse Trt.
fatty acids	49%	M-Pede Mycogen [y]	WARNING; 0+; 7-14 d int.; see Greenhouse Trt.
benomyl	50%	Benlate F, SP DuPont [z]	CAUTION; 4+; 3 lb*; 7-10 d int.
iprodione	50%	Rovral F, WG, WSP Rhône-Poulenc [p,v]	CAUTION; 0+; 4*, 7-14 d (alone) int.; 10*, 7 d (tank mix) int.
	42%	Rovral 4 F Rhône-Poulenc [p,v]	CAUTION; 0+; 4* (along); 10* (tank mix); 7-14 d int.
mefenoxam + copper	5+39%	Ridomil Gold Copper Novartis [q,t]	DANGER; 7+; 4*; 14 d int.
mefenoxam + chlorothalonil	5+72%	Ridomil Gold Bravo WP Novartis [q,v,w]	DANGER; 7+; 4*; 14 d int.
chlorothalonil	90%	Terranil 90DF, 90DF WSP Riverside/Terra [v,w]	DANGER; 0+; 7-10 d int.
	83%	Bravo Ultrex Zeneca [v,w]	DANGER; 0+; 7-10 d int.
	54%	Agronil 720 Helena; Bravo Weather Stik Zeneca; Terranil 6L Riverside/Terra [v,w]	WARNING; 0+; 7-10 d int.
	40%	Bravo 500 Zeneca; Agronil 500 Helena [v,w]	WARNING; 0+; 7-10 d int.
chlorothalonil + copper	24+14%	Terranil Cu Riverside/Terra [v,w]	DANGER; 0+; 7-10 d int.
copper	53%	Basicop WP Griffin [v,w]; Basic Copper 53 Micro Flo; Basic Copper Sulfate Drexel [t,v,w]; Microspurse COC 53 WP Micro Flo [o,v,w]	WARNING (BWP,BC53,BCS); DANGER (MCOC); 0+; 7-10 d int.
	50%	Kocide 101 WP Griffin; Nu-Cop 50WP Micro Flo [o,w]	DANGER; 0+; 7-14 d int.
		C-O-C-S WDG Platte [y,w]; KOP-Hydroxide 50 WS Drexel; Champion WP Agtrol [o,w]; Nu-Cop 50DF Micro Flo [o,p,v,w]	WARNING (COC); DANGER (CWP,KOP, NDF); 0+; (COC) 7-10 d, (CWP, KOP,NDF) 7-14 d int.
	40%	Kocide DF Griffin [o,w]	DANGER; 0+; 7-14 d int.
	35%	Kocide 2000 Griffin [o,v,w]	DANGER; 0+; 7-14 d int.

& Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season

30%	Top Cop Tri-Basic Stoller [o,v,w]	CAUTION ; 0+; 7-10 d int.
24%	Nu-Cop 3L Micro Flo; 3 Lb Copper F Helena [o,w]	WARNING (NC3); DANGER (3CF); 0+; 7-14 d int.
	KOP 300 F Copper F [t,v,w]; KOP-Hydroxide Drexel [w]	WARNING (K3); DANGER (KH); 0+; (K3) 7-10 d, (KH) 7-14 d int.
	Champ Formula 2 F Agtrol; Kocide 4.5LF Griffin [o,v,w]	CAUTION ; 0+; 7-14 d int.
15%	Kocide LF Griffin [w]; Champ F Agtrol [o,w]	CAUTION ; 0+; 7-14 d int.
sulfur + copper 50+8.4%	Top Cop With Sulfur F Stoller [v,w]	CAUTION ; 0+; 7-10 d int.
sulfur 99%	Commercial D Sulphur International Sulphur [y]	CAUTION ; 0+; as needed
98%	D Sulfur Wilbur-Ellis [y]	CAUTION ; 0+; same as above
97%	Spray Sulfur Wilbur-Ellis [y]	CAUTION ; 0+; as needed
94%	Superfine W Sulphur International Sulphur [y]	CAUTION ; 0+; as needed
92%	Golden-Dew Wilbur-Ellis [u]	CAUTION ; 0+; same as above
90%	Sulfur 90W Drexel; Dual Spraying and D Sulfur Micro Flo [y]	CAUTION ; 0+; (DSD) 14 d, (S90) 7-10 d int.
80%	Microthiol Special W Elf Atochem; Kumulus DF BASF; Micro Sulf Agtrol; Sulfur DF Wilbur-Ellis; Thiolux DF Micronized Sulfur Platte [y]	CAUTION ; 0+; (MSW,KDF,MS) 14 d int.; (TMS,SDF) as needed
53%	EM-53 L Sulphur International Sulphur [y]	CAUTION ; 0+; as needed
52%	That F Sulfur Stoller; Suffa Drexel; Sulfur F 6 Platte; Sulfur 6L Micro Flo; Riverside/Terra [y]	CAUTION ; 0+; (SF6,S6L,TFS) 14 d, (Suffa) 7-10 d int.
D. Greenhouse Treatment (see also pages 25-26)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [y]	CAUTION ; 0+; 7-14 d int.; transplant only; see Field Foliar Trt.
fatty acids 49%	M-Pede Mycogen [y]	WARNING ; 0+; 7-14 d int.; see Field Foliar Trt.
E. Postharvest Treatment (see also page 26)		
thiabendazole 99%	Decco Salt No.19 Elf-Atochem [p,z]	CAUTION ; dip before storage
42%	Mertect 340-F WDS Novartis [u,z]	CAUTION ; dip for 5-10 sec before storage

CELERY and RELATIVES

APIACEAE

Crop Codes	Disease Codes
<p>----- <i>Apium</i> species -----</p> <p>1 - Celeriac (<i>Apium graveolens</i> var. <i>rapaceum</i>)</p> <p>2 - Celery (<i>A. graveolens</i> var. <i>dulce</i>)</p> <p>----- Other species -----</p> <p>3 - Chervil (<i>Anthriscus cerefolium</i>)</p> <p>4 - Dill (<i>Anethum graveolens</i>)</p> <p>5 - Fennel, Florence (<i>Foeniculum vulgare</i> var. <i>azoricum</i>)</p> <p>6 - Parsley, curly and flat leaf (<i>Petroselinum crispum</i>, <i>P. crispum</i> var. <i>neapolitanum</i>)</p> <p>7 - Parsnip (<i>Pastinaca sativa</i> ssp. <i>sativa</i>)</p>	<p>n - Alternaria leaf spot</p> <p>o - Anthracnose (<i>Marssonina panattoiana</i>, etc.)</p> <p>p - Bacterial blight (northern, <i>Pseudomonas apii</i>; southern, <i>P. cichorii</i>, etc.)</p> <p>q - Bacterial ice nucleation</p> <p>r - Basal stalk rot (bottom rot, foliage blight; <i>Rhizoctonia solani</i>)</p> <p>s - Botrytis blight (gray mold; <i>Botrytis</i>)</p> <p>t - Cercospora blight (early blight; <i>Cercospora apii</i>)</p> <p>u - Damping-off (<i>Pythium</i>, <i>Phytophthora</i>, <i>Rhizoctonia</i>, other soil and seed fungi)</p> <p>v - Leaf spot (<i>Phoma</i>)</p> <p>w - Pink rot (<i>Sclerotinia sclerotiorum</i>)</p> <p>x - Plant parasitic nematodes (see label for species)</p> <p>y - Septoria blight (late blight; <i>Septoria apicola</i>)</p> <p>z - Viruses (see label for species)</p>

Ingredient	Trade Name&	Remarks&, #
A. Field Soil Treatment (see also pages 24-25)		
mefenoxam 48%	Ridomil Gold EC Novartis [2,5-7,u]	WARNING; 1*
25%	Ultra Flourish Agtrol [2,5,6,u]	WARNING; 1*
2.5%	Ridomil Gold GR Novartis [2,5,6,u]	CAUTION; 1*
oxamyl 24%	Vydate L DuPont [2,x]	DANGER; 14+; 3 gal*; see Field Foliar Trt.
B. Seed Treatment (see also page 25)		
fludioxonil 40%	Maxim 4FS Novartis [2,3,5-7,u]	CAUTION
metalaxyl 28%	Allegiance-FL Gustafson; Apron F Wilbur-Ellis [4,u]	CAUTION; Apron F commercial seed treater only
C. Field Foliar Treatment (see also page 25)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [4,6,w]	CAUTION; 0+; 7-14 d int.; see Greenhouse Trt.
mancozeb, maneb 80%	Manzate 80WP Griffin; Dithane M-45, WSP Rohm and Haas; Penncozeb 80WP Elf Atochem [5,t,y]	CAUTION; 14+; 16 lb*; 7-10 d int.
75%	Manzate 75DF Griffin; Dithane DF Rohm and Haas; Penncozeb 75DF Elf Atochem [5,t,y]	CAUTION; 14+; (M75) 16 lb*; (DF,P75) 17 lb*; 7-10 d int.
37%	Dithane F-45 Rohm and Haas; Manex II F Griffin [5,t,y]	CAUTION; 14+; (DF) 16 lb*; (M2F) 12.8*; 7-10 d int.

& Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
 # Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
 + Number of days from the last application until harvest (preharvest interval).
 * Maximum number of applications or maximum product amount per acre per season.

fosetyl-aluminum	80%	Aliette WDG, WSP Rhône-Poulenc [2,3,5,6,t,y]	CAUTION; 3+; 7*
oxamyl	24%	Vydate L DuPont [2,x]	DANGER; 14+; 3 gal*; 21 d int. (14-21 d preplant); see Field Soil Trt.
benomyl	50%	Benlate F, SP Du Pont [2,t,y]	CAUTION; 7+; 3 lb*; 7-10 d int.
dicloran	75%	Botran 75-W, Botran 75-WSB Gowan [2,5,w]	CAUTION; 7+ (low rate); 28+ (high rate); 7 d (summer), 14 d (fall/winter) int.
	47%	Botran 5F Gowan [2,w]	CAUTION; 7+ (low rate); 28+ (high rate); 7 d (summer), 14 d (fall/winter) int.
propiconazole	42%	Tilt SI, Tilt Novartis [2,t,y]	WARNING; 14+; 4*; 16 oz*; 7 d int.
chlorothalonil	90%	Terranil 90DF, 90DF WSP Riverside/Terra [2,r,t,w,y] [7,n,o,r,s]	DANGER; [2] 7+; [7] 10+; 4*; [2,t,y] twice weekly seed bed; [2,r,w] 3-5 d (low rate), 7 d (high rate) int.; [7] 7-10 d int.
	83%	Bravo Ultrex Zeneca [2,r,t,w,y] [7,n,o,r,s]	DANGER; (2) 7+; (7) 10+; (7) 4*; (2) 7 d, (7) 7-10 d int.
	54%	Bravo Weather Stik Zeneca; Terranil 6L Riverside/Terra; Agronil 720 Helena [2,r,t,w,y] [7,n,o,r,s]	WARNING; [2] 7+; [7] 10+; 4*; [2,t,y] twice weekly seed bed; [2,r,w] 3-5 d (low rate), 7 d (high rate) int.; [7] 7-10 d int.
	40%	Bravo 500 Zeneca [2,r,t,w,y] [7,n,o,r,s]; Agronil 500 Helena [2,r,t,w,y] [7,n,o,r,s,v]	WARNING; [2] 7+; [7] 10+; [7] 4*; [2,t,y] twice weekly seed bed; [2,r,w] 3-5 d (low rate), 7 d (high rate) int.; [2] 7 d; [7] 7-10 d int.
chlorothalonil + copper	24+14%	Terranil Cu Riverside/Terra [2,r,t,w,y]	DANGER; 7+; [t,y] twice weekly seed bed; [r,w] 3-5 d (low rate), 7 d (high rate) int.
copper + zinc	20+20%	Kocide 20/20 Griffin [2,p,t,y]	DANGER; 0+; 5-7 d int.
	4+4%	Copper-Z 4/4 F Helena [2,p,t,y]	DANGER; 0+; 7 d int.
copper	53%	Basicop WP Griffin [2,n,t,v,y]	WARNING; 0+; 5-14 d int.
		Microspense COC 53 WP Micro Flo [2,p,q,t,y]	DANGER; 0+; 5-10 d int.
		Basic Copper 53 Micro Flo; Basic Copper Sulfate Drexel [2,p,t,y]	WARNING; 0+; (BC53) 5-14 d, (BCS) 7 d int.
	50%	Nu-Cop 50WP Micro Flo; KOP-Hydroxide 50 WS Drexel [2,p,q,t,y]; C-0-C-S WDG Platte [2,p,s,y]	WARNING; 0+; (COC) 7-10 d, (KOP) 5-7 d, (NWP) 3-7 d int.
		Nu-Cop 50DF Micro Flo; Champion WP Agtrol [1,2,p,q,t,y][4,q,r,v][6,p,q]	DANGER; 0+; [1,2,6] 5-7 d, [4] 7-10 int.

Ingredient	Trade Name&	Remarks&,#
	Kocide 101 WP Griffin [1,2,p,q,t,y] [6,p,q]	DANGER ; 0+; 5-7 d int.
40%	Kocide DF Griffin [2,p,q,t,y] [6,p,q]	DANGER ; 0+; 5-7 d int.
30%	Top Cop Tri-Basic Stoller [2,p,q,t,y]	CAUTION ; 0+; 7 d int.
24%	Kocide 4.5LF Griffin; Champ Formula 2 F Agtrol; Nu-Cop 3L Micro Flo; 3 Lb Copper F Helena [1,2,p,q,t,y] [4,q,r,v] [6,p,q]	CAUTION (K4.5,CF2); WARNING (NC3); DANGER (3CF); 0+; [1,2,6] 5-7 d, [4] 7-10 d int.
	KOP-Hydroxide Drexel [2,p,t,y]	DANGER ; 0+; 5-7 d int.
	KOP 300 F Copper F Drexel [2,p,t,y]	WARNING ; 0+; 7 d int.
20%	Kocide 20/20 Griffin [2,p,t,y]	DANGER ; 0+; 5-7 d int.
15%	Kocide LF Griffin [2,p,t,y] [6,p]; Champ F Agtrol [1,2,p,q,t,y]	CAUTION ; 0+; 5-7 d int.
sulfur + copper 50+8.4%	Top Cop With Sulfur F Stoller [2,n,p,t,v,y]	CAUTION ; 0+; 7-10 d int.
sulfur 98%	D Sulfur Wilbur-Ellis [2,t,y]	CAUTION ; 0+; 7-10 d int.
92%	Golden-Dew Wilbur-Ellis [2,t,y]	CAUTION ; 0+; 7-10 d int.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [2,z]	CAUTION ; see Greenhouse Trt.

D. Greenhouse Treatment (see also pages 25-26)

<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [4,6,w]	CAUTION ; 0+; 7-14 d int.; transplant only; see Field Foliar Trt.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [2,z]	CAUTION ; see Field Foliar Trt.

CORN POACEAE *Zea mays* ssp. *mays*

Crop Codes	Disease Codes
1 - Corn, sweet	r - Damping-off (root disease; <i>Pythium</i>)
2 - Corn, sweet (seed production)	s - Damping-off (seedling disease, seedrot, seed decay, root disease, blight; <i>Rhizoctonia solani</i> , <i>Fusarium</i> , <i>Aspergillus</i> , <i>Penicillium</i>)
3 - Popcorn	t - Downy mildew (systemic; <i>Peronosclerospora sorghi</i>)
	u - Eye spot (<i>Kabatiella zeae</i>)
	v - Gray leaf spot (<i>Cercospora zeae-maydis</i>)
	w - "Helminthosporium" leaf spots and blights (<i>Cochliobolus heterostrophus</i> , <i>C. carbonum</i> , <i>Setosphaeria turcica</i> , <i>C. rostrata</i>)
	x - Plant parasitic nematodes (see label for species)
	y - Rust (common maize, <i>Puccinia sorghi</i> ; southern, <i>P. polysora</i>)
	z - Seed storage loss

& Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

A. Field Soil Treatment (see also pages 24-25)			
ethoprop	10%	Mocap EC Rhône-Poulenc [1,2,x]	DANGER; 1*
		Mocap 10% G Rhône-Poulenc [1,2,x]	WARNING; 1*
		Mocap 10% G Lock'n Load Rhône-Poulenc [1,2,x]	WARNING; specific nematodes
terbufos	20%	Counter CR, Lock'n Load American Cyanamid [1-3,x]	DANGER; at plant; 6.5 lb*
	15%	Counter 15G American Cyanamid [1-3,x]	DANGER; at plant; 8.7 lb*
B. Seed Treatment (see also page 25)			
metalaxyl	28%	Allegiance-FL Gustafson [1-3,s] [1,2,s,t]; Apron F Wilbur-Ellis [1-3,r]	CAUTION; Apron F for commercial seed treater only
	12%	Apron TL Wilbur-Ellis [1-3,r]	CAUTION; commercial seed treater only
fludioxonil	40%	Maxim 4FS Novartis [1-3,r,s,z]	CAUTION
	21%	Maxim XL Novartis [1-3,r,s,w]	CAUTION
captan	75%	Captan 75 D, Slurry, WDG Wilbur-Ellis [1,2,r,s]	DANGER
	39%	Captan 4000 Wilbur-Ellis; Captan 400 Gustafson [1,2,r,s,z]	DANGER
	29%	Captan 30-DD Gustafson [1,2,r,s,z]	DANGER
captan + diazinon + lindane 15+15+25%		Kernal Guard Riverside/Terra [1,2,r,s]	DANGER
thiram	50%	Thiram 50WP Dyed Gustafson [1,2,r,s]	CAUTION
carboxin + thiram 15+13%		Vitaflo-280 Gustafson [1,2,r,s]	CAUTION; commercial seed treater only
carboxin + diazinon + lindane 14+15+25%		KickStart Helena [1,2,s]	CAUTION
<i>Bacillus subtilis</i>	2.8%	Kodiak Concentrate Biological Fungicide Gustafson [1,2,r,s]	CAUTION; also for reformulation
C. Field Foliar Treatment (see also page 25)			
mancozeb, maneb	80%	Maneb 80WP Elf Atochem [1-3,w,y]	CAUTION; 7+; 7.5 lb*; 3-10 d int.
		Dithane M-45, WSP Rohm and Haas [1-3,w,y]; Manzate 80WP Griffin; Penncozeb 80WP Elf Atochem [1-3,v,w,y]	CAUTION; 7+; (D45,DSP,P80) 6 lb a.i.*; (M80) 7.22 lb a.i.*; 4-7 d int.
	75%	Manzate 75DF Griffin; Penncozeb 75DF Elf Atochem [1-3,v,w,y]; Dithane DF Rohm and Haas; Maneb 75DF Elf Atochem [1-3,w,y]	CAUTION; 7+; (P75,DF,Maneb) 6 lb a.i.*; (MZ75) 7.5 lb a.i.*; (P75,DF,MZ75) 4-7 d, (Maneb) 3-10 d int.

Ingredient	Trade Name&	Remarks&,#
37%	Manex II F Griffin [1-3,v,w,y]; Dithane F-45 Rohm and Haas; Manex F With Zinc Griffin [1-3,w,y]	CAUTION ; 7+; 6 qt*; (DF,M2F) 4-7 d, (MF) 3-10 d int.
chlorothalonil 90%	Terranil 90DF, 90DF WSP Riverside/Terra [1,2,w,y]	DANGER ; 14+; 4-7 d int.; no processing
82%	Bravo Ultrex Zeneca [1,2,w,y]	DANGER ; 14+; 4-7 d int.
54%	Agronil 720 Helena; Bravo 720, Bravo Weather Stik Zeneca; Terranil 6L Riverside/Terra [1,2,w,y]	WARNING ; 14+; 4-7 d int.; no processing
40%	Bravo 500 Zeneca; Agronil 500 Helena [1,2,w,y]	WARNING ; 14+; 4-7 d int.
propiconazole 42%	Tilt SI, Tilt Novartis [1-3,u-w,y]	WARNING ; [1,2] 14+; [3] 30+; 16 oz*; [w,y] 7-14 d; [u,v] 14 d int.

& Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

CRUCIFERS (COLE CROPS and RELATIVES) BRASSICACEAE

Crop Codes	Disease Codes
<p>----- Brassica species -----</p> <p>1 - Bok choy (pak choi, mustard cabbage; <i>Brassica rapa</i> var. <i>chinesis</i>)</p> <p>2 - Broccoli (flowering, cavalo broccoli; <i>B. oleracea</i> var. <i>italica</i>)</p> <p>3 - Broccoli, Chinese (gay lon; <i>B. oleracea</i> var. <i>alboglabra</i>)</p> <p>4 - Broccoli raab (<i>B. ruvo</i>)</p> <p>5 - Brussels sprouts (<i>B. oleracea</i> var. <i>gemmifera</i>)</p> <p>6 - Cabbage (<i>B. oleracea</i> var. <i>capitata</i>, <i>B. oleracea</i> var. <i>sabauda</i>)</p> <p>7 - Cabbage, Chinese loosehead (<i>B. rapa</i> ssp. <i>pekinensis</i>)</p> <p>8 - Cabbage, Chinese tight-heading (Napa; <i>B. rapa</i> ssp. <i>pekinensis</i>)</p> <p>9 - Cauliflower (<i>B. oleracea</i> var. <i>botrytis</i>)</p> <p>10 - Collards (<i>B. oleracea</i> var. <i>viridis</i>)</p> <p>11 - Kale, common (<i>B. oleracea</i> var. <i>sabellica</i>)</p> <p>12 - Kohlrabi (<i>B. oleracea</i> var. <i>gongylodes</i>)</p> <p>13 - Mustard greens (Chinese mustard, spinach mustard; <i>B. rapa</i> ssp. <i>nipposinica</i>, <i>B. rapa</i> var. <i>perviridis</i>, <i>B. juncea</i> var. <i>crispifolia</i>, <i>B. juncea</i> var. <i>foliosa</i>, <i>B. juncea</i> var. <i>rugosa</i>, <i>B. juncea</i> var. <i>japonica</i>)</p> <p>14 - Rape greens (<i>B. napus</i> var. <i>napus</i>)</p> <p>15 - Rutabaga (<i>B. napus</i> var. <i>napobrassica</i>)</p> <p>16 - Turnip (<i>B. rapa</i> ssp. <i>rapa</i>)</p> <p>----- Other species -----</p> <p>17 - Arugula (rocket salad, roquette; <i>Eruca sativa</i>)</p> <p>18 - Cress, garden (peppergrass; <i>Lepidium sativum</i>, <i>L. virginicum</i>)</p> <p>19 - Cress, upland (<i>Barbarea vulgaris</i>, <i>B. verna</i>)</p> <p>20 - Horseradish (<i>Armoracia rusticiana</i>)</p> <p>21 - Radish (<i>Raphanus sativus</i> var. <i>sativus</i>)</p> <p>22 - Watercress (<i>Rorippa nasturtium-aquaticum</i>)</p>	<p>g - Anthracnose (<i>Colletotrichum gloesporioides</i>; <i>C. higginsianum</i>)</p> <p>h - Bacterial ice nucleation</p> <p>i - Basal stem rot (<i>Phytophthora</i>)</p> <p>j - Black leg (seedborne; <i>Phoma lingam</i>)</p> <p>k - Black rot (<i>Xanthomonas campestris</i> pv. <i>campestris</i>)</p> <p>l - Clubroot (<i>Plasmodiophora brassicae</i>)</p> <p>m - Damping-off (<i>Pythium</i>)</p> <p>n - Damping-off (seedling blight, seedling disease, seed rot, seed decay, wirestem, black root; <i>Rhizoctonia</i>, <i>Fusarium</i>)</p> <p>o - Downy mildew (<i>Peronospora parasitica</i>)</p> <p>p - Gray mold (<i>Botrytis</i>)</p> <p>q - Leaf spot (black leaf spot; <i>Alternaria brassicae</i>, <i>A. brassicicola</i>)</p> <p>r - Leaf spot (<i>Cercospora brassicae</i>)</p> <p>s - Leaf spot (<i>Septoria</i>)</p> <p>t - Plant parasitic nematodes (see label for species)</p> <p>u - Powdery mildew (<i>Erysiphe</i>)</p> <p>v - Ring spot (<i>Mycosphaerella brassicicola</i>)</p> <p>w - Seed storage loss</p> <p>x - Soilborne plant pathogenic fungi</p> <p>y - White mold (watery soft rot; <i>Sclerotinia sclerotiorum</i>, <i>S. minor</i>)</p> <p>z - White rust (<i>Albugo candida</i>)</p>

A. Field Soil Treatment (see also, pages 24-25)

fenamiphos 15%	Nemacur 15% G Bayer [5,6,8,t]	DANGER; 1*
ethoprop 70%	Mocap EC Rhône-Poulenc [6-8,t]	DANGER; 1*
	Mocap 10% G Rhône-Poulenc [6-8,t]	WARNING; 1*
	Mocap 10% G Lock'n Load Rhône-Poulenc [6-8,t]	WARNING; specific nematodes
metam-sodium 42%	Vapam HL Amvac [1-22,k-n,t]	DANGER; 1*
12	Soil-Prep 42 Wilbur-Ellis [1-22,k-n,t]	DANGER; 1*

Ingredient	Trade Name&	Remarks&, #
33%	Vapam Amvac [1-22,k-n,t]	DANGER; 1*
mefenoxam 48%	Ridomil Gold EC Novartis [1-22,i,m]	WARNING; 1*
25%	Ultra Flourish Agtrol [18,19,m]	WARNING; 1*
2.5%	Ridomil Gold GR Novartis [18,19,m]	CAUTION; 1*
PCNB 75%	PCNB 75WP, 75WSP Amvac [2-9,1,n]; Terraclor 75WP Uniroyal [2-6,8,9,1,n]	CAUTION
40%	Terraclor F Uniroyal [2-6,8,9,1,n]	CAUTION; at plant; 30 lb a.i.*
10%	PCNB 10% G Amvac [2-9,1,n]; Terraclor 10% G Uniroyal [2-6,8,9,1,n]	CAUTION
<i>Myrothecium verrucaria</i> 28%	DiTera ES Abbott [1-22,t]	CAUTION
B. Seed Treatment (see also page 25)		
fludioxonil 40%	Maxim 4FS Novartis [1-22,m,n,w]	CAUTION; 1*
thiram 50%	Thiram 50WP Dyed Gustafson [2-13,16,21,m,n]	CAUTION; 1*
captan + lindane 12+25%	Seed Mate Isotex Seed Treater F Loveland Industries [2-6,9,21,m,n]	DANGER
captan 75%	Captan 75 Slurry, D, WDG Wilbur-Ellis [2-9,15,16,21,m,n]	DANGER; 1*
39%	Captan 4000 Wilbur-Ellis [2-9,13,14,16,21,m,n,w]; Captan 400 Gustafson [2-11,13,14,16,21,m,n,w]	DANGER; 1*
29%	Captan 30-DD Gustafson [2-11,13,14,16,21,m,n,w]	DANGER; 1*
benomyl 50%	Benlate F, SP DuPont [2-16,j]	CAUTION; 1*; slurry
C. Field Foliar Treatment (see also page 25)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [17,u]	CAUTION; 0+; 7-14 d int.; see Greenhouse Trt.
fatty acids 49%	M-Pede Mycogen [1-13,15,20-22,u]	WARNING; 0+; 7-14 d int.; see Greenhouse Trt.
mancozeb, maneb 80%	Maneb 80WP Elf Atochem [2-6,8,9,11,12,o,q]	CAUTION; 12 lb*; 30+; 7-10 d int.
75%	Maneb 75DF Elf Atochem [2-9,11,12,o,q]	CAUTION; 7+; [7] 10+; [2-9,11] 12.8 lb*; [12] 4.2 lb*; 7-10 d int.

Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

37%	Manex F With Zinc Griffin [2-9,11,12,o,q]	CAUTION; [2-9,12] 7+; [11] 10+; [2-6,8,9,12] 9.6 qt*; [7] 7.2 qt*; [11] 3.2 qt*; 7-10 d int.
chlorothalonil 90%	Terranil 90DF, 90DF WSP Riverside/Terra [2-6,8,9,o,q]	DANGER; 0+; [3,8] 7+; 7-10 d int.
82%	Bravo Ultrex Zeneca [2-6,9,o,q]	DANGER; 7+; 7-10 d int.
54%	Agronil 720 Helena; Terranil 6L Riverside/Terra [2-6,8,9,o,q]; Bravo Weather Stik Zeneca [2-6,9,o,q]	WARNING; 0+; [3,8] 7+; 7-10 d int.
40%	Bravo 500 Zeneca [2-6,9,o,q]; Agronil 500 Helena [2-6,8,9,o,q]	WARNING; 0+; [3,8] 7+; 7-10 d int.
mefenoxam + chlorothalonil 5+72%	Ridomil Gold Bravo WP Novartis [2,3,5,6,8,9,o,q]	DANGER; 7+; 4*; 14 d int.
sulfur + chlorothalonil 27+19%	Bravo S Helena [2-9,o,q,u]	CAUTION; 0+; [o,q] 7-10 d, [u] 21 d int.
	Terranil S Riverside/Terra [2-9,o,q,u]	WARNING; [2,4-7,9] 0+; [3,8] 7+; [o,q] 7-10 d, [u] 21 d int.
benomyl 50%	Benlate F, SP DuPont [5,g,p,v,y] [7,8,y] [16,g,r,u,y]	CAUTION; [5] 7+, 3*, 6 lb*, 7 d int.; [7,8] 7+, 6*, 3 lb*, 7-10 d int.; [16] 14+, 3*, 1.5 lb*, 14 d int.
fosetyl- aluminum 80%	Aliette WDG, WSP Rhône-Poulenc [1-6,8-14,17-19,o]	CAUTION; 3+; 7*; 7-21 d int.; no copper mixture
iprodione 50%	Rovral F, WG, WSP Rhône-Poulenc [2-4,j]	CAUTION (RF); WARNING (RWG,RSP); 0+; 2*
42%	Rovral 4 F Rhône-Poulenc [2-4,j]	CAUTION; 0+; 2*
fosetyl- aluminum and maneb 80% 75%	Aliette/Maneb 2+2 Rhône-Poulenc [2-6,8,9,11,12,o,q]	CAUTION; 7+; 6*; [11] 10+; 7*, 7-10 d int.; no copper mixture
mefenoxam + copper 5+39%	Ridomil Gold Copper Novartis [21,z]	DANGER; 7+; 4*; 14 d int.
copper 53%	Basicop WP Griffin; Basic Copper "53" Micro Flo [2-9,o,q-s]; Basic Copper Sulfate Drexel [2-4,6-9,o,q-s]	WARNING; 0+; 7-10 d int.
50%	KOP-Hydroxide 50 WS Drexel [2-9,h,k,q] [6-8,o]; C-O-C-S WDG Platte [2-9,k,o]	WARNING; 0+; 7-10 d int.
	Nu-Cop 50DF Micro Flo [22,h,r]; Champion WP Agtrol [2-10,13,16,h,k,o,q] [22,h,r]	DANGER; 0+; 7-10 d int.; [22] 4*, 7-14 d int.
	Kocide 101 WP Griffin [2-10,h,k,o,q] [22,h,r]	DANGER; 0+; [2-10] 7-10 d int.; [22] 4*, 7-14 d int.
	Nu-Cop 50WP Micro Flo [2-10,h,o] [6-8,h,k,q]	DANGER; 0+; [h] 24-72 hr before frost; [o] 7 d, [k,q] 7-10 d int.

Ingredient	Trade Name&	Remarks&,#
40%	Kocide DF Griffin [2-10,13,16,h,k,o,q] [22,h,r]	DANGER ; 0+; [2-10] 7-10 d int.; [22] 4*, 7-14 d int.
35%	Kocide 2000 Griffin [2-10,h,k,o,q] [22,h,r]	DANGER ; 0+; [2-10] 7-10 d int.; [22] 4*, 7-14 d int.
30%	Top Cop Tri-Basic Stoller [2-10,12,13,16,21,h,o,q-s]	CAUTION ; 0+; 7-10 d int.
24%	Champ Formula 2 F Agtrol [2-11,13,16,h,k,o,q] [22,h,r]	CAUTION ; 0+; [2-11,13,16] 7 d, [22] 7-14 d int.
	Kocide 4.5LF Griffin [2-10,13,16,h,k,o,q] [22,r]	CAUTION ; 0+; [2-10,13,16] 7-10 d, [22] 7-14 d int.
	3 Lb Copper F Helena [2-10,h,o] [6-8,h,k,o,q] [22,h,r]	DANGER ; 0+; [h] 24-72 hrs before frost; [2-10,6-8] 7 d, [22] 4*, 7-14 d int.
	KOP-Hydroxide Drexel [2-9,o] [6-8,k,q]	DANGER ; 0+; [2-9,o] 7 d, [6-8,k,q] 7-10 d int.
	KOP 300 F Copper F Drexel [2-4,6-9,o,q-s]	WARNING ; 0+; 7-10 d int.
	Nu-Cop 3L Micro Flo [2-10,h,o] [22,h,r]	WARNING ; 0+; [2-10] 7 d int.; [22] 4*, 7-14 d int.
15%	Kocide LF Griffin [2-10,k,q] [6-8,k,o,q] [22,r]	CAUTION ; 0+; 7-10 d int.; [22] 4*, 7-14 d int.
	Champ F Agtrol [2-5,9,h,o] [6-8,h,k,o,q]	CAUTION ; 0+; [h] 24-72 hrs before frost; [2-9,o] 7 d, [6-8,k,q] 7-10 d int.
sulfur + copper 50+8.4%	Top Cop With Sulfur F Stoller [2-13,16,21,k,o,q-s]	CAUTION ; 0+; 7-10 d int.; plant beds 3 d int.
sulfur 99%	Commercial D Sulphur International Sulphur [2,5,6,9,15,16,u]	CAUTION ; 0+; 7-10 d int.
98%	Signal D Sulfur, Special Electric Wilbur-Ellis [15,16,u]	CAUTION (SD); WARNING (SE); 0+; 7-10 d int.; (SD) with heavy rainfall 7-14 d int.
	D Sulfur Wilbur-Ellis [2-11,15,16,u]	CAUTION ; 0+; [2-11,16] 7-10 d, [15] 7-14 d int.
	D Sulfur Platte [15,16,u]	CAUTION ; 0+; 7-14 d int.
94%	Superfine W Sulphur International Sulphur [2,5,6,9,15,16,u]	CAUTION ; 0+; 7-14 d int.
92%	Golden-Dew Wilbur-Ellis [2-11,13,15,16,u]	CAUTION ; 0+
90%	W Sulfur Helena [2-11,u]; Dual Spraying and D Sulfur, Microsprerse WS Micro Flo [2-11,13,15,16,u]	CAUTION ; 0+; (WS,MWS)10-14 d, (DSD) 14 d int.

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Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

	Sulfur 90W Drexel [2-11,13,15,16,u] [15,z]	CAUTION; 0+; [2-11,13,15,16,u] 10-14 d, [15,z] 14 d int.
85%	Ben-Sul 85 Wilbur-Ellis [15,16,u]	CAUTION; 0+; 7-10 d int.
80%	Kumulus DF BASF; Sulfur DF Wilbur-Ellis [2-11,13,15,16,s,u]; Thiolux DF Micronized Sulfur Platte [2-11,15,16,u,z]; Micro Sulf Agtrol [2-6,9-11,13,u]	CAUTION; 0+; 10-14 d int.;
	Microthiol Special W Elf Atochem [2-11,13,15,16,u]	CAUTION; 0+; [10,11,13,15,16] 14 d, [2-9] 10-14 d int.
53%	EM-53 L Sulphur International Sulphur [2,5,6,9,u]	CAUTION; 0+
52%	Suffa Drexel [2-11,13,15,16,u] [15,u,z]; Sulfur F 6 Platte; Sulfur 6L Micro Flo, Riverside/Terra [2-11,13,15,16,u,z]	CAUTION; 0+; 10-14 d, [16] 14 d int.
	Liquid Sulfur Six Helena [1-22,u]	CAUTION; 0+; 21 d int.
potassium bicarbonate 85%	Armicarb 100 F, 100 WSP Church and Dwight [6-8,g,i,j,o-q,u,v]	CAUTION; 0+; 7-14 d int.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [6-9,q,u]	CAUTION; see Greenhouse Trt.
D. Greenhouse Treatment (see also pages 25-26)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [17,u]	CAUTION; 0+; 7-14 d int.; transplant only; see Field Foliar Trt.
fatty acids 49%	M-Pede Mycogen [1-13,15,20-22,u]	WARNING; 0+; 7-14 d int.; see Field Foliar Trt.
PCNB 40%	Terraclor 400 Uniroyal [2-9,n]	CAUTION; container grown only
10%	Terraclor 10% G, Turfcide Uniroyal [2-9,n]	CAUTION; container grown only
<i>Trichoderma harzianum</i> 1.2%	Bio-Trek 22G Wilbur-Ellis [6-8,m,x], Bio-Trek Nursery Drench Wilbur-Ellis [6-8,m,n]	CAUTION
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [6-9,q,u]	CAUTION; see Field Foliar Trt.

CUCURBITS CUCURBITACEAE

Crop Codes	Disease Codes
<p>----- <i>Cucumis</i> species -----</p> <p>1 - Cantaloupe (honey balls, muskmelon, Persian melon; <i>Cucumis melo</i> var. <i>cantalupensis</i>)</p> <p>2 - Cucumber (gherkin; <i>C. sativus</i>, var. <i>sativus</i>)</p> <p>3 - Melon, garden (mango melon; <i>Cucumis melo</i> var. <i>chito</i>)</p> <p>4 - Melon, winter (casaba melon, honeydew melon, crenshaw melon; <i>Cucumis melo</i> var. <i>inodorus</i>)</p> <p>----- <i>Cucurbita</i> species -----</p> <p>5 - Pumpkin (calabaza, cushaw; <i>Cucurbita argyrosperma</i>, <i>C. maxima</i>, <i>C. moschata</i>, <i>C. pepo</i>)</p> <p>6 - Squash, summer (straightneck, crookneck, zucchini; <i>C. pepo</i>)</p> <p>7 - Squash, winter (spaghetti, acorn, buttercup; <i>C. argyrosperma</i>, <i>C. maxima</i>, <i>C. moschata</i>, <i>C. pepo</i>)</p> <p>----- Other species -----</p> <p>8 - Balsam pear (bitter melon, balsam apple, Chinese cucumber; <i>Momordica charantia</i>, <i>M. balsamima</i>, <i>M. cochinchinensis</i>)</p> <p>9 - Citron melon (<i>Citrullus lanatus</i> var. <i>citroides</i>)</p> <p>10 - Gourd, edible (<i>Lagenaria</i>, <i>Luffa</i>)</p> <p>11 - Watermelon (<i>C. lanatus</i> var. <i>lanatus</i>)</p> <p>12 - Waxgourd (Chinese squash, Chinese waxgourd, Chinese preserving melon; <i>Benincas hispida</i>)</p>	<p>c - post-harvest decay</p> <p>d - Angular leaf spot (<i>Pseudomonas syringae</i> pv. <i>lachrymans</i>)</p> <p>e - Anthracnose (<i>Colletotrichum orbiculare</i>)</p> <p>f - Bacterial fruit blotch (<i>Acidovorax avenae</i> subsp. <i>citrulli</i>)</p> <p>g - Bacterial ice nucleation</p> <p>h - Bacterial wilt (<i>Erwinia tracheiphila</i>)</p> <p>i - Belly rot (<i>Rhizoctonia solani</i>)</p> <p>j - Damping-off (<i>Pythium</i>)</p> <p>k - Damping-off (seedling blight, seedling disease, seed rot, seed decay; <i>Fusarium</i>, <i>Rhizoctonia solani</i>)</p> <p>l - Downy mildew (<i>Pseudoperonospora cubensis</i>)</p> <p>m - Fruit rot (cottony leak; <i>Pythium</i>)</p> <p>n - Gummy stem blight (black rot; <i>Didymella bryoniae</i>)</p> <p>o - Leaf spot [leaf blight; <i>Alternaria cucumerina</i> (syn. <i>Macrosporium</i>)]</p> <p>p - Leaf spot (<i>Cercospora citrullina</i>)</p> <p>q - Plant parasitic nematodes (see label for species)</p> <p>r - Powdery mildew (<i>Erysiphe cichoracearum</i>)</p> <p>s - Powdery mildew (<i>Sphaerotheca fuliginea</i>)</p> <p>t - Root and fruit rot (<i>Phytophthora</i>)</p> <p>u - Scab (<i>Cladosporium cucumerinum</i>)</p> <p>v - Seed storage loss</p> <p>w - Target spot (<i>Corynespora cassiicola</i>)</p> <p>x - Viruses (see label for species)</p> <p>y - White mold (<i>Sclerotinia sclerotiorum</i>)</p> <p>z - Wilt [<i>Acremonium</i> (syn. <i>Cephalosporium</i>)</p>

Ingredient	Trade Name&	Remarks&, #
A. Field Soil Treatment (see also, pages 24-25)		
ethoprop 70%	Mocap EC Rhône-Poulenc [2,q]	DANGER; 1*
10%	Mocap 10% G, Lock'n Load Rhône-Poulenc [2,q]	WARNING; 1*
oxamyl 24%	Vydate L DuPont [1,2,4-7,11,q]	DANGER; 1+; 3 gal*; see Field Foliar Trt.
mefenoxam 48%	Ridomil Gold EC Novartis [1-12,j,m]	WARNING; 1*
25%	Ultra Flourish Agtrol [1-12,j,m]	WARNING; 1*
benomyl 50%	Benlate F, SP DuPont [1,3,4,9,11,z]	CAUTION; 8 oz*; furrow at plant

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 * Maximum number of applications or maximum product amount per acre per season.

B. Seed Treatment (see also page 25)

fludioxonil 40%	Maxim 4FS Novartis [1,2,5-7,9-12,j,k,v]	CAUTION
metalaxyl 28%	Allegiance-FL Gustafson [2,j]	WARNING
thiram 50%	Thiram 50WP Dyed Gustafson [1,2,5-7,11,j,k]	CAUTION
captan + lindane 12+25%	Seed Mate Isotex Seed Treater F Loveland Industries [1,2,5-7,11,j,k]	DANGER
captan 75%	Captan 75 Slurry, D, WDG Wilbur-Ellis [1,2,5-7,11,j,k]	DANGER
38%	Captan 4000 Wilbur-Ellis; Captan 400 Gustafson [1,2,5-7,11,j,k,v]	DANGER
29%	Captan 30-DD Gustafson [1,2,5-7,11,j,k,v]	DANGER

C. Field Foliar Treatment (see also page 25)

<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [1-12,r,s]	CAUTION; 0+; 7-14 d int.; see Greenhouse Trt.
fatty acids 49%	M-Pede Mycogen [1-6,9,11,r,s]	WARNING; 0+; 7-14 d int.; see Greenhouse Trt.
trifloxystrobin 50%	Flint Novartis [1,2,5-7,9-12,l,r,s]	CAUTION; 0+; 4*; 7-14 d int.
oxamyl 24%	Vydate L DuPont [1,2,4-7,11,q]	DANGER; 1+; 3 gal*; 14-21 d int.; see Field Soil Trt.
azoxystrobin 30%	Quadris Zeneca [1-7,9-11,e,i,l,n-p,r,s]	CAUTION; 1+; 6*; [l,r,s] 5-7 d, [i] 10-14 d, [e,n-p] 7-14 d int.
thiophanate-methyl 70%	Topsin M 70W, WSB Elf Atochem [1-7,9,11,k,e,n,r,w]	CAUTION; 0+; 7-14 d, [w] 7 d int.
benomyl 50%	Benlate F, SP DuPont [1-7,9,11,e,r,s,w]	CAUTION; 1+; 2 lb*; 7-14 d, [w] 7 d int.
mefenoxam + mancozeb 4+64%	Ridomil Gold MZ Novartis [1,4,11,l]	CAUTION; 5+; 4*; 12.8 lb a.i. mancozeb*; 14 d int.
mefenoxam + copper 5+39%	Ridomil Gold Copper Novartis [1-12,l]	DANGER; 5+; 4*; 14 d int.
mefenoxam + chlorothalonil 5+72%	Ridomil Gold Bravo WP Novartis [1,2,4-7,11,e,l,n-p,u]	DANGER; 0+; 4*; 10-14 d, [o] 14 d int.
fosetyl-aluminum 80%	Aliette WDG [1,2,5-12,l,t], Aliette WSP Rhône-Poulenc [1-4,6-8,10-12,l]	CAUTION; 0+; 7*; 7-14 d int.; no copper mixture
fosetyl-aluminum and maneb 80% and 75%	Aliette/Maneb 2+2 Rhône-Poulenc [1,4,11,e,l,n-p] [2,d,e,l,m,o] [5,d,l] [6,7,e,l]	CAUTION; 5+; 7*; 7-10 d int.; no copper mixture
mancozeb, maneb 80%	Penncozeb 80WP Elf Atochem [1,3,4,11,e,l,n-p] [2,d,e,l,m,o] [6,7,10,e,l]	CAUTION; 5+; 24 lb*; 7-10 d int.

Ingredient	Trade Name&	Remarks&, #
	Maneb 80WP Elf Atochem [1,3,4,11,e,n-p,s] [2,d,e,l,m,o] [5,d,l] [6,7,e,l]	CAUTION; 5+; 12 lb*; 7-10 d int.
	Manzate 80WP Griffin [1,4,11,e,l,n-p] [2,e,l,n,p,u] [6,l]	CAUTION; 5+; 24 lb*; 7-10 d int.
	Dithane M-45, WSP Rohm and Haas [1,3,4,e,l,n,o] [2,e,l,n,p,u] [6,l] [11,e,l,n-p,u]	CAUTION; 5+; 24 lb*; 7-10 d int.
75%	Maneb 75DF Elf Atochem [1,3,4,11,e,n-p,s] [2,d,e,l,m,o] [5,d,l] [6,7,e,l]	CAUTION; 5+; 12.8 lb a.i.*; 7-10 d int.
	Manzate 75DF Griffin [1,4,11,e,l,n-p] [2,e,l,n,p,u] [6,l]	CAUTION; 5+; 24 lb a.i.*; 7-10 d int.
	Penncozeb 75DF Elf Atochem [1,3,4,11,e,l,n-p] [2,d,e,l,m,o] [6,7,10,e,l]	CAUTION; 5+; 25.6 lb*; 7-10 d int.
	Dithane DF Rohm and Haas [1,3,4,e,l,n,o][2,e,l,n,p,u][6,l][11,e,l,n-p,u]	CAUTION; 5+; 25.6 lb*; 7-10 d int.
37%	Dithane F-45 Rohm and Haas [1,3,4,e,l,n,o] [2,e,l,n,p,u] [6,l] [11,e,l,n-p,u]	CAUTION; 5+; 19.2 qt*; 7-10 d int.
	Manex II F Griffin [1,4,11,e,l,n-p] [2,e,l,n,p,u] [6,l]	CAUTION; 5+; 19.2 lb*; 7-10 d int.
	Manex F With Zinc Griffin [1,4,e,l,n-p] [2,d,e,l,m,o] [5,d,l] [7,e,l]	CAUTION; 5+; 12.8 qt*; 7-10 d int.
mancozeb + copper 15+30%	ManKocide Griffin [1,4,11,e-g,l,n-p] [2,d,e,g,l,n] [6,e,g,l,r,s]	DANGER; 5+; 128 lb*; 7 d int.
myclobutanil 40%	Nova 40W Rohm and Haas [1-12,s]	WARNING; 2+; 6*, 15 oz*; 7-10 d int.; Texas Section 18 Specific Exemption
chlorothalonil 90%	Terranil 90DF, 90DF WSP Riverside/Terra [1,2,4-7,11,e,i,l,n-p,s,w]	DANGER; 0+; 7 d int.; [i] apply once
83%	Bravo Ultrex Zeneca [1,2,4-7,11,e,i,l,n-p,r,s,u,w]	DANGER; 0+; 7 d int.; [i] apply once
54%	Agronil 720 Helena; Bravo Weather Stik Zeneca; Terranil 6L Riverside/Terra [1,2,4-7,11,e,i,l,n-p,s,u,w]	WARNING; 0+; 7 d int.; [i] apply once
40%	Bravo 500 Zeneca; Agronil 500 Helena [1,2,4-7,11,e,i,l,n-p,s,u,w]	WARNING; 0+; [i] apply once; (A500) 7 d int.
chlorothalonil + copper 24+14%	Terranil Cu Riverside/Terra [1,2,4-7,e,i,l,n-p,s,u,w]	DANGER; 0+; [i] apply once; [e,l,n-p,s,u,w] 7 d int.
copper + zinc 4+4%	Copper-Z 4/4 F Helena [1,4,11,d,l,o,r,s,u] [2,6,7,d,o,r,s]	DANGER; 0+; 7 d, [d] 5-7 d int.
copper 53%	Basicop WP Griffin [1-4,6,7,9,11,d,e,l]	WARNING; 0+; 7-10 d int.

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	Microperse COC 53 WP Micro Flo [1,4,g,l] [2,d,e,g,l,p] [5-7,e,g,l,o,r,s] [6,7,d]	DANGER ; 0+; 7 d int.
	Basic Copper Sulfate Drexel [1-7,9,11,d,e,h,l,n-p,r,s,u]; Basic Copper 53 Micro Flo [1-7,9,11,d,e,h,l,n-s,u]	WARNING ; 0+; (BCS)7-10 d int.; (BC53) 5-10 d, 3-4 d (high population) int.
50%	C-O-C-S WDG Platte [1-7,9,11,d,e,l,o,p]	WARNING ; 0+; 7-10 d int.
	KOP-Hydroxide 50 WS Drexel [1,4,g,l] [2,d,g,l] [5-7,g,r,s] [11,e,g,l]; Nu-Cop 50DF Micro Flo [1,4,g,l] [2,d,g,l] [5,7,g,r,s] [11,e-g,l]	DANGER ; 0+; [1,4] 5-7 d, [2,5-7,11] 7 d int.; (NC50DF) see Greenhouse Trt.
	Champion WP Agtrol [1,2,4-7,11,d-g,l,n,o,r,s]	DANGER ; 0+; 5-7 d int.
	Kocide 101 WP Griffin [1,4,g,l] [2,d,g,l] [5-7,g,r,s] [11,e,g,l]	DANGER ; 0+; [1,4] 5-7 d, [2,5-7,11] 7 d int.
	Nu-Cop 50WP Micro Flo [1,4,g,l] [2,d,g,l] [5-7,g,l] [11,e,g,l]	DANGER ; 0+; 7 d int.
40%	Kocide DF Griffin [1,4,g,l] [2,d,g,l] [5-7,g,r,s] [11,e-g,l]	DANGER ; 0+; [1,4] 5-7 d, [2,5-7,11] 7 d int.
35%	Kocide 2000 Griffin [1,2,4-7,11,d-g,l,n,o,r,s]	DANGER ; 0+; 5-7 d int.
30%	Top Cop Tri-Basic Stoller [1-7,9,11,d,e,g,h,l,n-p,r,s,u]	CAUTION ; 0+; 7-10 d, 3-4 d (dense planting) int.
24%	Nu-Cop 3L Micro Flo [1,2,4-7,11,d-g,l,n,o,r,s]	WARNING ; 0+; 5-10 d int.
	3 Lb Copper F Helena [1,2,4-7,11,d-g,l,n,o,r,s]; KOP-Hydroxide Drexel [1,4,l] [2,d,l] [5-7,r,s] [11,e,l]	DANGER ; 0+; 7 d int.
	Kocide 4.5LF Griffin; Champ Formula 2 F Agtrol [1,2,4-7,11,d-g,l,n,o,r,s]	CAUTION ; 0+; 5-7 d int.
	KOP 300 F Copper F Drexel [1-7,9,11,d,e,h,l,n-p,r,s,u]	WARNING ; 0+; 7-10 d, 3-4 d (high population) int.
15%	Kocide LF Griffin [1,4,l] [2,d,l] [5-7,r,s] [11,e,l]	CAUTION ; 0+; [1,4] 5-7 d, [2,5-7,11] 7 d int.
	Champ F Agtrol [1,4,g,l] [2,d,g,l] [5-7,g,r,s] [11,e,g,l]	CAUTION ; 0+; [1,4,l] 5-7 d, [2,11,l] 7 d int.
sulfur + copper 50+8.4%	Top Cop With Sulfur F Stoller [1,2,5-7,11,l,r,s]	CAUTION ; 0+; 7-10 d int.
sulfur 98%	D Sulfur Wilbur-Ellis [1-7,9,11,r,s,u]	CAUTION ; 0+; 7 d int.;
	Special Electric, Signal D Sulfur Wilbur-Ellis [1,3,4,9,11,r,s]	WARNING (SE); CAUTION (SD) ; 0+; 7-10 d, (SD) 7-14 d (rain) int.
97%	Spray Sulfur Wilbur-Ellis [1,3,4,9,11,r,s]	CAUTION ; 0+
92%	Golden-Dew Wilbur-Ellis [1,3,4,6,7,9,11,r,s]	CAUTION ; 0+

Ingredient	Trade Name&	Remarks&, #
90%	Dual Spraying and D Sulfur, Microperse WS Micro Flo [1-4,6,7,9,11,r,s]; 90% Sulfur D Helena [1,3,4,9,11,r,s]	CAUTION; 0+
	Sulfur 90W Drexel [1,3,4,9,11,r,s]	CAUTION; 0+; 7 d int.
85%	Ben-Sul 85 Wilbur-Ellis [1,3,4,9,11,r,s]	CAUTION; 0+; 7-10 d int.
80%	Kumulus DF BASF; Sulfur DF Wilbur-Ellis [1,3,4,9,11,r,s]; Micro Sulf Agtrol [1,2,4,6,7,9,11,r,s]	CAUTION; 0+; as needed
	Microthiol Special W Elf Atochem [1-4,6,7,9,11,r,s]; Thiolux DF Micronized Sulfur Platte [1-22,u]	CAUTION; 0+; (MSW) as needed; (TMS) 10-14 d int.;
60%	Ben-Sul 60 D Wilbur-Ellis [1,3,4,9,11,r,s]	CAUTION; 0+; 7-10 d int.
52%	That F Sulfur Stoller; Sulfur 6L Riverside/Terra [1-7,9,11,r,s]; Sulfur F 6 Platte; Sulfur 6L Micro Flo [1-4,6,7,9,11,r,s]; Suffa Drexel [1,3,4,9,11,r,s]	CAUTION; 0+; (TFS) 14 d int.; (S6L,SF6) as needed; (Suffa) 7 d int.
potassium bicarbonate 85%	Armicarb 100 F, 100 WSP Church and Dwight [1,2,5-7,11,e,l,o,r-t]	CAUTION; 0+; 7-14 d int.
paraffinic oil 99%	SunSpray Ultra-Fine Sun Co Inc [1-12,r,s] [1,3,4,n,o,r,s]	CAUTION; 0+; 4*; 14 d int.; see Greenhouse Trt.
97%	JMS Stylet-Oil JMS Flower Farms [1-12,n,o,r,s,x]	CAUTION; see Greenhouse Trt.
D. Greenhouse Treatment (see also pages 25-26)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [1-12,r,s]	CAUTION; 0+; 7-14 d int.; transplant; see Field Foliar
fatty acids 49%	M-Pede Mycogen [1-6,9,11,r,s]	WARNING; 0+; 7-14 d int.; see Field Foliar Trt.
dicloran 75%	Botran 75WSB Gowan [2,y]	CAUTION; 1+; 14 d int.
copper 50%	Nu-Cop 50 DF Micro Flo [2,d,g,l]	DANGER; 0+; 7 d int.; see Field Foliar Trt.
40%	Kocide DF Griffin [2,d,g,l]	DANGER; 0+; 7 d int.
35%	Kocide 2000 Griffin [2,d,g,l]	DANGER; 0+; 7 d int.
24%	Kocide 4.5LF Griffin [2,d,g,l]	CAUTION; 0+; 7 d int.
paraffinic oil 99%	Sunspray Ultra-Fine Sun Co Inc [1-12,r,s] [1,3,4,9,11,n,o,r,s]	CAUTION; 0+; 4*; 14 d int.; see Field Foliar Trt.
97%	JMS Stylet-Oil JMS Flower Fm [1-12,n,o,r,s,x]	CAUTION; see Field Foliar Trt.

<i>Trichoderma harzianum</i> 1.2%	Bio-Trek 22G Wilbur-Ellis [2,j,y]; Bio-Trek Nursery Drench Wilbur-Ellis [2,i-k]	CAUTION
E. Postharvest (see also page 26)		
orthophenyl-phenol 2.5%	Cucumber/Pepper Luster 223 F Elf-Atochem [2,c]	CAUTION
EGGPLANT SOLANACEAE <i>Solanum melongena</i>		
Disease Codes		
m - Anthracnose (<i>Colletotrichum melongenae</i>) n - Bacterial ice nucleation o - Blight (<i>Phomopsis vexans</i>) p - Crown rot (root rot, blight, fruit rot; <i>Phytophthora capsici</i> , <i>P. parasitica</i>) q - Damping-off (<i>Pythium</i>) r - Damping-off (seedling blight, seedling disease, seed rot, seed decay; <i>Rhizoctonia</i> , other soil and seed fungi) s - Gray leaf spot (<i>Stemphylium</i>) t - Late blight (<i>Phytophthora infestans</i>) u - Leaf mold (<i>Cladosporium</i>) v - Leaf spot (leaf blight, early blight, stem blight; <i>Alternaria</i>) w - Leaf spot (<i>Septoria melongenae</i>) x - Plant parasitic nematodes (see label for species) y - Powdery mildew (<i>Erysiphe polyphaga</i> , <i>Leveillula taurica</i>) z - Viruses (see label for species)		
A. Field Soil Treatment (see also, pages 24-25)		
fenamiphos 35%	Nemacur 3 E Bayer [x]	DANGER; 1*
15%	Nemacur 15% G Bayer [x]	DANGER; 1*
oxamyl 24%	Vydate L DuPont [x]	DANGER; 7+; 3 gal*; 28 d int.; see Field Foliar Trt.
mefenoxam 48%	Ridomil Gold EC Novartis [p,q]	WARNING; 7+; 3 pt*; 30 d int.
25%	Ultra Flourish Agtrol [p,q]	WARNING; 1*
B. Seed Treatment (see also page 25)		
captan 75%	Captan 75 Slurry, WDG, D Wilbur-Ellis [q,r]	DANGER
thiram 50%	Thiram 50WP Dyed Gustafson [q,r]	CAUTION
C. Field Foliar Treatment (see also page 25)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [y]	CAUTION; 0+; 7-14 d int.; see Greenhouse Trt.
fatty acids 49%	M-Pede Mycogen [y]	WARNING; 0+; 7-14 d int.; see Greenhouse Trt.
oxamyl 24%	Vydate L DuPont [x]	DANGER; 7+; 3 gal*; 7-14 d int.; see Field Soil Trt.
mancozeb, maneb 80%	Maneb 80WP Elf Atochem [m,s-w]	CAUTION; 14 lb*; 5+; 7-10 d int.
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Ingredient	Trade Name&	Remarks&, #
75%	Maneb 75DF Elf Atochem [m,s-w]	CAUTION ; 5+; 11.2 lb a.i.*; 7-10 d int.
37%	Manex F with Zinc Griffin [m,s-w]	CAUTION ; 5+; 11.2 qt*; 7-10 d int.
copper 53%	Basic Copper 53 Micro Flo; Basic Copper Sulfate Drexel; Basicop WP Griffin [m,o,v]; Microspense COC 53 WP Micro Flo [m-v]	WARNING ; (BC53,BCS,BWP); DANGER (MCOG); 0+; 7-10 d int.
52%	Sulfur 6L Micro Flo [y]	CAUTION ; 0+; 7 d int.
50%	C-O-C-S WDG Platte [m,t,v]; KOP-Hydroxide 50 WS Drexel; Champion WP Agtrol; Nu-Cop 50DF Micro Flo [m-o,v]	WARNING (CO); DANGER (KO,CW,NC); 0+; 7-10 d int.; (NC) see Greenhouse Trt.
	Kocide 101 WP Griffin; Nu-Cop 50WP Micro Flo [m-o,v]	DANGER ; 0+; 7-10 d int.
40%	Kocide DF Griffin [m-o,v]	DANGER ; 0+; 7-10 d int.
35%	Kocide 2000 Griffin [m-o,v]	DANGER ; 0+; 7-10 d int.
30%	Top Cop Tri-Basic Stoller [m-o,v]	CAUTION ; 0+; 7-10 d int.
24%	Kocide 4.5LF Griffin; Nu-Cop 3L Micro Flo; Champ Formula 2 F Agtrol; 3 Lb Copper F Helena; KOP-Hydroxide Drexel [m,o,y]	CAUTION (K4.5,CF2); WARNING (NC3); DANGER (3LB,KOP); 0+; 7-10 d int.
	KOP 300 F Copper F Drexel [m,o,v]	WARNING ; 0+; 7-10 d int.
15%	Champ F Agtrol [m-o,v]; Kocide LF Griffin [m,o,v]	CAUTION ; 0+; 7-10 d int.
sulfur + copper 50+8.4%	Top Cop With Sulfur F Stoller [m,o,v]	CAUTION ; 0+; 7-10 d int.
sulfur 98%	D Sulfur Wilbur-Ellis [y]	CAUTION ; 0+; 7 d int.
90%	Sulfur 90W Drexel [y]	CAUTION ; 0+; 7 d int.
52%	Sulfur F 6 Platte [y]	CAUTION ; 0+; 7 d int.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [v,y,z]	CAUTION ; see Greenhouse Trt.
D. Greenhouse Treatment (see also, pages 25-26)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [y]	CAUTION ; 0+; 7-14 d int.; transplants only; see Field Foliar Trt.
fatty acids 49%	M-Pede Mycogen [y]	WARNING ; 0+; 7-14 d int.; see Field Foliar Trt.

& Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

copper	50%	Kocide 101 WP Griffin; Nu-Cop 50DF Micro Flo [m-o,v]	DANGER; 0+; 7-10 d int.; see Field Foliar Trt.
	40%	Kocide DF Griffin [m-o,v]	DANGER; 0+; 7-10 int.
	35%	Kocide 2000 Griffin [m-o,v]	DANGER; 0+; 7-10 int.
	24%	Kocide 4.5LF Griffin [m-o,v]	CAUTION; 0+; 7-10 d int.
paraffinic oil	97%	JMS Stylet-Oil JMS Flower Farms [v,y,z]	CAUTION; see Field Foliar Trt.

GENERAL (ALL VEGETABLES and HERBS)

	Disease and Use Codes
	r - Powdery mildew s - Sanitize nonporous nonfood contact surfaces (disinfection) t - Bacteria u - Damping-off (seedborne, soilborne, seed rot, early rot, root and stem rot, wilt; <i>Fusarium, Rhizoctonia, Alternaria, Phomopsis</i>) v - Gray mold (<i>Botrytis</i>) w - Plant parasitic nematodes (see label for species) x - Plant pathogenic fungi y - Root disease (<i>Phytophthora, Pythium</i>) z - Vegetable washing

A. Field Soil Treatment

metam-sodium	42%	Vapam HL Amvac [u-y]; Nemasol 42% Platte [u,w-y]	DANGER
		Soil-Prep 42, IV Wilbur-Ellis [u,w-y]	DANGER
	33%	Vapam Amvac; Nemasol Soil Fumigant Platte [u,w-y]	DANGER
		Soil-Prep III Wilbur-Ellis [u,w-y]	DANGER
chloropicrin	97%	Chlor-O-Pic Great Lakes [w,x]	DANGER
methyl bromide + chloropicrin	98+2%	Brom-O-Gas, Brom-O-Gas 2, Terr-O-Gas 98 Great Lakes; MBC 98-2 Riverside/Terra [u,w,y]	DANGER; all transplants; specific vegetables for production
	80+20%	MBC 80-20 Riverside/Terra [u,w,y]	DANGER; same as above
	75+25%	MBC 75-25 Riverside/Terra [u,w]; Terr-O-Gas 75 Great Lakes [w,y]	DANGER; same as above
	67+33%	Terr-O-Gas 67 Great Lakes; MBC 67-33 Riverside/Terra [u,w]	DANGER; same as above
dichloropropene + chloropicrin	61+35%	Telone C-35 Dow AgroSciences [w]	DANGER
dichloropropene + chloropicrin	78+17%	Telone C-17 Dow AgroSciences [w]	DANGER

Ingredient	Trade Name&	Remarks&, #
<i>Streptomyces griseoviridis</i> 30%	Mycostop Biofungicide Kemira Agro Oy [t,u,x,y]	CAUTION; not for melon; check emergence on small quantity of seed before seed soak
<i>Trichoderma harzianum</i> 1.2%	T-22 Planter Box Biological Fungicide BioWorks [u,y]	CAUTION; in-furrow or transplant solution; not for mushroom or chickpea
<u>B. Seed and Seed Piece Treatment</u>		
thiram 42%	42-S Thiram Gustafson [u]	CAUTION
<i>Bacillus subtilis</i> 2.8%	Kodiak Conc. Biological Fungicide Gustafson [u,y]	CAUTION
<i>Trichoderma harzianum</i> 1.2%	T-22 Planter Box Biological Fungicide, RootShield Drench BioWorks [u,y]	CAUTION; (T22) seed, transplant solution, other propagative material, in-furrow, drench; not for mushroom or chickpea
<u>C. Field Foliar Treatment</u>		
copper 35%	Kocide 2000 Griffin [u,v,x,y]	WARNING; 0+; specific crops; see Greenhouse Trt.
paraffinic oil 99%	Sun Spray Ultra-Fine Sun Co Inc [x]	CAUTION; 0+; specific crops; see Greenhouse Trt.
<u>D. Greenhouse and Cold Frame Treatment</u>		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [x]	CAUTION; 0+; 7-14 d int.; for transplants, specific crops
methyl bromide + chloropicrin 98+2%	Brom-O-Gas, Brom-O-Gas 2, Terr-O-Gas 98 Great Lakes; MBC 98-2 Riverside/Terra [u,w,y]	DANGER; transplant production only
80+20%	MBC 80-20 Riverside/Terra [u,w,y]	DANGER; transplants only
75+25%	MBC 75-25 Riverside/Terra; Terr-O-Gas 75 Great Lakes [u,w]	DANGER; transplants only; specific crops
67+33%	Terr-O-Gas 67 Great Lakes; MBC 67-33 Riverside/Terra [u,w,y]	DANGER; transplants only; specific crops
copper 50%	C-O-C-S WDG Platte [u]	WARNING; begin at emergence; not for cabbage or related seedlings
	Kocide 101 WP Griffin [u,v,x,y]	DANGER; 0+; specific crops
35%	Kocide 2000 Griffin [u,v,x,y]	WARNING; 0+; specific crops
24%	Champ Formula 2 F Agtrol; Kocide 4.5LF Griffin; [t-y]	CAUTION; 0+; specific crops

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Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

paraffinic oil 99%	Sunspray Ultra-Fine Sun Co. Inc [x]	CAUTION; specific crops; see Field Foliar Trt.
<i>Streptomyces griseoviridis</i> 30%	Mycostop Biofungicide Kemira Agro Oy [t,u,x,y]	CAUTION; no mix with pesticide or concentrated fertilizer
<i>Trichoderma harzianum</i> 1.2%	RootShield G [u,y], RootShield Drench [r,v] BioWorks	CAUTION; (RSG) soil amendment or broadcast; (RSD) foliar; not for mushroom or chickpea
<u>E. Structures, Vehicles, Machinery, and Equipment Treatments</u>		
sodium hypo-chlorite 10%	Dixichlor DPC Industries [s,z]	DANGER
5.3%	Clorox Clorox Company [w-y]	WARNING
methyl bromide 100%	Meth-O-Gas Q Great Lakes [t,w,x]	DANGER; quarantine/regulatory only; greater than 70 F only
<u>F. Postharvest Treatment</u>		
sodium hypo-chlorite 12%	Agclor 310 Elf-Atochem [z]	DANGER; specific crops
10%	Dixichlor DPC Industries [s,z]	DANGER
5.3%	Clorox Clorox Company [z]	WARNING
sodium hydroxide 10%	Fruit & Vegetable Kleen 440 Elf-Atochem [z]	DANGER; should be used by or under supervision by DECCO personnel

LEGUMES FABACEA

Crop Codes	Disease Codes
<p>----- <i>Phaseolus</i> species -----</p> <p>1 - Bean (dry, field, navy, green, French, bush, snap, succulent, runner, pole, string, wax, kidney, colored, pinto; <i>Phaseolus vulgaris</i> var. <i>vulgaris</i>)</p> <p>2 - Bean, baby lima (<i>P. lunatus</i> var. <i>lunatus</i>)</p> <p>3 - Bean, large lima (<i>P. lunatus</i> var. <i>lunatus</i>)</p> <p>----- <i>Pisum</i> species -----</p> <p>4 - Pea, field (<i>P. sativum</i> var. <i>arvense</i>)</p> <p>5 - Pea, garden (<i>Pisum sativum</i> var. <i>sativum</i>)</p> <p>6 - Pea, sugar (snow, succulent; <i>P. sativum</i> var. <i>macrocarpon</i>)</p> <p>----- Other species -----</p> <p>7 - Bean, broad (fava, faba bean; <i>Vicia faba</i> var. <i>faba</i>)</p> <p>8 - Bean, mung (<i>Vigna radiata</i> var. <i>radiata</i>)</p> <p>9 - Catjang (catjang cowpea; <i>Vigna unguicalata</i> ssp. <i>cylindrica</i>)</p> <p>10 - Chickpea (garbanzo bean; <i>Cicer arietinum</i>)</p> <p>11 - Lentil (<i>Lens culinaris</i>)</p> <p>12 - Pea, southern (blackeyed pea, cowpea, crowder pea; <i>Vigna unguiculata</i> var. <i>unguiculata</i>)</p> <p>13 - Soybean, vegetable (edible; <i>Glycine max</i>)</p>	<p>f - Angular leaf spot (<i>Phaeoisariopsis griseola</i>)</p> <p>g - Anthracnose (<i>Glomerella lindemuthiana</i>, <i>Colletotrichum pisi</i>)</p> <p>h - Ascochyta leaf spot (blight; <i>Phoma exigua</i> var. <i>exigua</i>)</p> <p>i - Bacterial brown spot (<i>Pseudomonas syringae</i> pv. <i>syringae</i>)</p> <p>j - Bacterial ice nucleation</p> <p>k - Common bacterial blight (<i>Xanthomonas phaseoli</i>, <i>X. phaseoli</i> var. <i>fuscans</i>)</p> <p>l - Damping-off (seedling blight, seedling disease, seed rot, seed decay, root rot, soreshin, stem rot; <i>Fusarium</i>, <i>Rhizoctonia solani</i>)</p> <p>m - Damping-off (seed rot, seedling rot, root rot; <i>Pythium</i>, <i>Phytophthora</i>)</p> <p>n - Downy mildew (<i>Phytophthora nicotianae</i> var. <i>parasitica</i>, <i>P. phaseoli</i>, <i>Peronospora pisi</i>)</p> <p>o - Gray mold (blight; <i>Botrytis cinerea</i>)</p> <p>p - Halo bacterial blight (<i>Pseudomonas syringae</i> pv. <i>phaseolicola</i>)</p> <p>q - Leaf spot (<i>Cercospora canescens</i>, <i>C. cruenta</i>)</p> <p>r - Leaf spot (<i>Septoria</i>)</p> <p>s - Nodulation improvement (<i>Rhizobium phaseoli</i>)</p> <p>t - Plant parasitic nematodes (see label for species)</p> <p>u - Powdery mildew (<i>Erysiphe polygoni</i>)</p> <p>v - Rust (<i>Uromyces appendiculatus</i>, <i>U. pisi</i>, <i>U. fabae</i>, <i>U. trifolli</i>)</p> <p>w - Seed storage loss</p> <p>x - Southern Blight (<i>Sclerotium rolfsii</i>)</p> <p>y - Viruses (see label for species)</p> <p>z - White mold (<i>Sclerotinia sclerotiorum</i>)</p>

Ingredient	Trade Name&	Remarks&, #
A. Field Soil Treatment (see also pages 24-25)		
ethoprop 70%	Mocap EC Rhône-Poulenc [1-3,t]	DANGER; 1*
10%	Mocap 10% G, Lock'n Load Rhône-Poulenc [1-3,t]	WARNING; 1*
aldicarb 15%	Temik 15G Lock'n Load, CP Rhône-Poulenc [1,t]	DANGER; 90+; at plant 1*; 14 lb*
mefenoxam 48%	Ridomil Gold EC Novartis [1-13,m]	WARNING; 1*
PCNB + mefenoxam 10+0.5%	Ridomil Gold PC Novartis [1,1,m]	WARNING; 1*

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 # Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
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 * Maximum number of applications or maximum product amount per acre per season.

PCNB	75%	Terraclor 75WP Uniroyal [1,1]; PCNB 75WP, 75WSP Amvac [1,z] [1-3,7,8,1]	CAUTION
	40%	Terraclor F Uniroyal [1,1]	CAUTION ; 1*; at plant
	24%	PCNB 2-E Liquid EC Amvac [1,z] [1-3,7,8,1]; PCNB 2-E Wilbur-Ellis [1-8,12,1]	WARNING (P2EL); DANGER (P2E); 1*; [1,z] furrow drench; [1-3,7,8,1] 14-21 d (severe) int.; not after first bloom
		Terraclor 2 Lb E Uniroyal [1,1]	WARNING ; at plant
	10%	PCNB 10% G Amvac [1-3,7,8,1]; Terraclor 10% G Uniroyal [1,1]	CAUTION
benomyl	50%	Benlate F, SP DuPont [1,1]	CAUTION ; 4 lb*; snap bean only
B. Seed Treatment (see also page 25)			
fludioxonil	40%	Maxim 4FS Novartis [1-13,1,m,w]	CAUTION
mefenoxam	32%	Apron XL LS Novartis [1-13,m] [4-6,m,n]	WARNING
metalaxyl	50%	Apron F Wilbur-Ellis [1-5,10-12,m] [4-6,12,m,n]	CAUTION ; commercial seed treater only
	28%	Allegiance-FL Gustafson [1-13,m] [4-6,12,m,n]	WARNING
PCNB + metalaxyl + <i>Bacillus subtilis</i> 17+4.3+0.1%		System 3 Helena [1-8,12,1,m]	CAUTION
PCNB	24%	RTU-PCNB Gustafson; PCNB 2-E Liquid EC Amvac; PCNB 2-E Wilbur-Ellis [1-8,12,1]	CAUTION (RTU); WARNING (P2EL); DANGER (P2E); (RTU) commercial seed treater only
captan + lindane	12+25%	Seed Mate Isotex Seed Treater F Loveland Industries [1-8,12,1,m]	DANGER
	20%	PCNB 2 LF Amvac [1-8,10,12,1]	CAUTION
captan	75%	Captan 75 Slurry, WDG, D Wilbur-Ellis [1,3-8,12,1,m]	DANGER ; not on baby lima beans
	38%	Captan 4000 Wilbur-Ellis [1,4-6,11,12,1,m,w]; Captan 400 Gustafson [1-12,1,m,w]	DANGER ; not on baby lima beans
	29%	Captan 30-DD Gustafson [1-12,1,m,w]	DANGER
chloroneb	65%	Demosan 65W Kincaid [1-3,12,1,m]	CAUTION
	30%	Demosan F Kincaid [1-3,12,1,m]	CAUTION
		Nu-Flow D Wilbur-Ellis [1-3,7,8,1,m]	WARNING
captan + diazinon + lindane 15+15+25%		Kernel Guard Riverside/Terra [1,6,1,m]	DANGER ; hopper box
carboxin + diazinon + lindane 14+15+25%		KickStart Helena [1-3,7,8,1,m]	CAUTION

Ingredient	Trade Name&	Remarks&, #
captan + PCNB + thiabendazole 20+8+1%	Rival Flowable Gustafson [1,1,m]	DANGER ; commercial seed treater only
thiram 50%	Thiram 50WP Dyed Gustafson [1-12,1,m]	CAUTION
carboxin + thiram 15+13%	Vitaflo-280 Gustafson [1-3,7,8,1,m]	CAUTION ; commercial seed treater only
5.7+5.7%	Vitavax-CT Helena [1,1]	CAUTION
<i>Bacillus subtilis</i> 2.8%	Kodiak Concentrate Biological Fungicide Gustafson [1-5,1]	CAUTION ; also for reformulation
streptomycin sulfate 63%	Agricultural Streptomycin Gustafson [1-3,7,8,p]	CAUTION
C. Field Foliar Treatment (see also page 25)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [1-8,12,u]	CAUTION ; 0+; 7-14 d int.; see Greenhouse Trt.
fatty acids 49%	M-Pede Mycogen [1-8,12,u]	WARNING ; 0+; 7-14 d int.; see Greenhouse Trt.
mancozeb, maneb 80%	Maneb 80WP Elf Atochem [1,g,n,w]	CAUTION ; 30+; 12 lb*; 7-10 d int.
75%	Maneb 75DF Elf Atochem [1,g,n,v]	CAUTION ; 30+; 12.8 lb*; 5-7 d int.
37%	Manex F With Zinc Griffin [1,g,n,v]	CAUTION ; 30+; 9.6 qt*; 5-7 d int.
chlorothalonil 90%	Terranil 90DF, 90DF WSP Riverside/Terra [1,o,v] [1-3,12,g,n,v] [12,q]	DANGER ; [snap] 7+; [snap] 7 d int.; [1-3,12] 42+; [dry] 7-10 d int.; for beans harvested dry with pods removed
83%	Bravo Ultrex Zeneca [1,g,h,n,o,q,v]	DANGER ; [snap] 7+, 11 lb*, 7 d int.; [dry] 14 +, 4*, 7-10 d int.; [dry] for beans harvested dry with pods removed
54%	Agronil 720 Helena; Terranil 6L Riverside/Terra [1,q,r,v] [1-3,12,p,q,v]	WARNING ; [snap](A720,T6L) 7+; [1-3,12] (T6L) 42+, (A720) 14+; [snap] 7 d int.; [1-3,12] 7-10 d int.
	Bravo Weather Stik Zeneca [1,o,v] [1-3,12,g,n,q,v]	WARNING ; [snap] 7+, 7 d int.; [dry, navy, pinto, kidney] and [2,3,12] 14+; 4*; 7-10 d int.
40%	Bravo 500 Zeneca; Agronil 500 Helena [1,o,v] [1-3,g,n,q,v]	WARNING ; [snap only] 7+ [1-3] 42+; [1-3] 7-10 d int.

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* Maximum number of applications or maximum product amount per acre per season.

39%	Bravo Zn Zeneca [1-3,12,g,h,n,q,v]	WARNING; 14+; 4*; 7-10 d int.; for beans harvested dry with pods removed
	Terranil Zn Riverside/Terra [1,3,12,g,n,v] [12,q]	WARNING; 42+; 7-10 d int.; for beans harvested dry with pods removed
chlorothalonil + copper 24+14%	Terranil Cu Riverside/Terra [1,o,v] [1-3,12,g,n,v] [12,q]	DANGER; [snap] 7+, 7 d int.; [1-3,12] 42+, 7-10 d int.
sulfur + chlorothalonil 27+19%	Bravo S Helena; Terranil S Riverside/Terra [1,o,u,v]	CAUTION (BS); WARNING (TS); 7+; 7 d int.
thiophanate-methyl 70%	Topsin M WSB, 70W Elf Atochem [1-3,7,8,g,o,z]	CAUTION; [1] 14+; [2,3] 28+
benomyl 50%	Benlate F, SP DuPont [1,g,o,z]	CAUTION; [dry, snap] 14+; [other/succulent] 28+; 7-10 d int.; [dry] 7 d int.
iprodione 50%	Rovral F, WG, WSP Rhône-Poulenc [1-3,o,z]	CAUTION (RF); WARNING (RWG,RSP); 2*; 5-7 d int. or by growth stage; not after peak bloom
42%	Rovral 4 F Rhône-Poulenc [1-3,o,z]	CAUTION; 2*; 5-7 d int. or by growth stage; not after peak bloom
dicloran 75%	Botran 75WSB Gowan [1,z]	CAUTION; 2+; 7 d int.
copper + zinc 4+4%	Copper-Z 4/4 F Helena [1-3,7,8,k,p]	DANGER; 0+; 7-10 d int.
copper 53%	Basicop WP Griffin [1-3,7,8,g,k,n,p-r,u]	WARNING; 0+; 7-10 d, [k] 7 d int.
	Microspense COC 53 WP Micro Flo [1,f,g,j,k,n,p] [4-6,12,j,k,p,u]	DANGER; 0+; [1] 5-10 d, [4-6,12] 7 d int.
	Basic Copper Sulfate Drexel [1,f,g,k,n,p]	WARNING; 0+; 5-7 d int.
	Basic Copper 53 Micro Flo [1,f,g,k,n,u]	WARNING; 0+; 5-10 d int.
50%	C-O-C-S WDG Platte [1,g,k,n,p,q]; KOP-Hydroxide 50 WS Drexel [1-3,7,8,j,k,p] [4-6,12,j,u]; Champion WP Agtrol [1,i-k,p] [4-6,12,j,u]	WARNING (COC); DANGER (KOP, CWP); 0+; (COC) 7-10 d int.; (CWP,KOP) [1] 7-14 d int., [4-6,12] 7 d int.
	Nu-Cop 50DF, Nu-Cop 50WP Micro Flo; Kocide 101 WP Griffin [1-3,7,8,i-k,p] [4-6,12,j,u]	DANGER; 0+; [1-3,7,8] 7-14 d, [4-6,12] 7 d int.
40%	Kocide DF Griffin [1-3,7,8,i-k,p] [4-6,12,j,u]	DANGER; 0+; [1-3,7,8] 7-14 d, [4-6,12] 7 d int.
35%	Kocide 2000 Griffin [1,i-k,p] [4-6,12,j,u]	DANGER; 0+; [1] 7-14 d, [4-6,12] 7 d int.
30%	Top Cop Tri-Basic Stoller [1-3,f,g,j,k,n]	CAUTION; 0+; 5-7 d int.

Ingredient	Trade Name&	Remarks&, #
24%	Nu-Cop 3L Micro Flo; 3 Lb Copper F Helena [1-3,7,8,j,k,p] [4-6,12,j,u]; KOP-Hydroxide Drexel [1-3,7,8,k,p] [4-6,12,u]	WARNING (NC3); DANGER (3CF,KOP); 0+; [1-3,7,8] 7-14 d, [4-6,12] 7 d int.
	Kocide 4.5LF Griffin; Champ Formula 2 F Agtrol [1,i-k,p] [4-6,12,j,u]	CAUTION ; 0+; [1] 7-14 d, [4- 6,12] 7 d int.
	KOP 300 F Copper F Drexel [1,f,g,k,n,p]	WARNING ; 0+ 5-7 d int.
15%	Kocide LF Griffin [1,i,k,p] [4-6,12,u]	CAUTION ; 0+; [1] 7-14 d, [4- 6,12] 7 d int.
	Champ F Agtrol [1-3,7,8,j,k,p] [4-6,12,j,u]	CAUTION ; 0+; [1-3,7,8] 7-14 d, [4-6,12] 7 d int.
sulfur + copper 50+8.4%	Top Cop With Sulfur F Stoller [1-3,7,8,n,p,u,v] [4-6,12,u]	CAUTION ; 0+; 7 d int.
sulfur 99%	Commercial D Sulphur International Sulphur [1-3,u,v] [4-6,12,u]	CAUTION ; 0+; 7-10 d int.
98%	D Sulfur Wilbur-Ellis [1-8,u,v] [12,v]	CAUTION ; 0+; [1-8] as needed; [12] 7-10 d int.
97%	Spray Sulfur Wilbur-Ellis [1-3,7,8,u] [3-6,12,u,v]	CAUTION ; 0+; [1-3,7,8] as needed; [3-6,12] 7-10 d int.
94%	Superfine W Sulphur International Sulphur [1-3,u,v] [4-6,12,u]	CAUTION ; 0+; 7-14 d int.
92%	Golden-Dew Wilbur-Ellis [1-8,12,u,z]	CAUTION ; 0+; as needed
90%	Microperse WS Micro Flo [1-3,u] [4- 6,12,r,u]; W Sulfur Helena [1-8,12,u]	CAUTION ; 0+; 10-14 d int.
	Dual Spraying and D Sulfur Micro Flo [1-3,q,r,u]	CAUTION ; 0+; 14 d int.
	90% Sulfur D Helena [1-8,12,u]	CAUTION ; 0+; as needed
	Sulfur 90W Drexel [1-8,q,r,u,v] [12,v]	CAUTION ; 0+; [1-8] 7-14 d, [12] 7-10 d int.
85%	Ben-Sul 85 Wilbur-Ellis [1-3,7,8,u,v] [3-6,12,u]	CAUTION ; 0+; 7-10 d int.
81%	Ben-Sul Spray Wilbur-Ellis [1-8,12,u,v]	CAUTION ; 0+; 7-10 d int.
80%	Kumulux DF BASF; Sulfur DF Wilbur- Ellis [1-8,12,r,u]; Thiolux DF Micronized Sulfur Platte [1-8,12,u,v]	CAUTION ; 0+; 10-14 d int.; (SDF) as needed

& Crop (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
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* Maximum number of applications or maximum product amount per acre per season.

	Microthiol Special W Elf Atochem [1-3,7,8,u]; Micro Sulf Agtrol [1-3,7,8,q,r,u] [4-6,12,r,u]	CAUTION; 0+; 14 d int.
60%	Ben-Sul 60 D Wilbur-Ellis [1-3,7,8,u]	CAUTION; 0+; 7-10 d int.
53%	EM-53 L Sulphur International Sulphur [1-3,u,v] [4-6,12,u]	CAUTION; 0+; [1-3] 7-14 d int.; [4-6] as needed
52%	Sulfur F 6 Platte [1-3,7,8,u,v] [4-6,12,r,u,v]	CAUTION; 0+; [1-3,7,8] 14 d,[4-6,12] 10-14 d int.
	That F Sulfur Stoller [1-3,f,h,q,r,u,v]	CAUTION; 0+; 14 d int.
	Sulfur 6L Riverside/Terra; Micro Flo [1-3,7,8,q,r,u,v] [4-6,12,r,u,v]	CAUTION; 0+; [1-3,7,8] 14 d,[4-6,12] 10-14 int.
	Suffa Drexel [1-8,g,r,u] [12,v]; Liquid Sulfur Six Helena [1-8,12,u]	CAUTION; 0+; 21 d, (Suffa) 7-14 d, [12] 7-10 d int.
potassium bicarbonate 85%	Armcarb 100 F, 100 WSP Church and Dwight [4-6,12,g,h,n,o,r,u]	CAUTION; 0+; 7-14 d int.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [1-3,7,8,u,v,y]	CAUTION; see Greenhouse Trt.
<u>D. Greenhouse Treatment (see also pages 25-26)</u>		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [1-8,12,u]	CAUTION; 0+; 7-14 d int.; transplant only; see Field Foliar Trt.
fatty acids 49%	M-Pede Mycogen [1-8,12,u]	WARNING; 0+; 7-14 d int.; see Field Foliar Trt.
PCNB 40%	Terraclor 400 Uniroyal [1-3,7,8,1,m]	CAUTION; container grown only
10%	Terraclor 10% G, Turfcide Uniroyal [1-3,7,8,1,m]	CAUTION; container grown only
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [1-3,7,8,u,v,y]	CAUTION; see Field Foliar Trt.

LETTUCE and RELATIVES ASTERACEAE

Crop Codes	Disease Codes
<p>-----<i>Lactuca</i> species -----</p> <p>1 - Lettuce, celery (celtuce; <i>Lactuca sativa</i> var. <i>angustana</i>)</p> <p>2 - Lettuce, head (<i>L. sativa</i> var. <i>capitata</i>)</p> <p>3 - Lettuce, leaf (<i>L. sativa</i>)</p> <p>----- Other species -----</p> <p>4 - Cardoon (<i>Cynara cardunculus</i> ssp. <i>cardunculus</i>)</p> <p>5 - Chicory (red chicory, radicchio; <i>Cichorium intybus</i>)</p> <p>6 - Chrysanthemum, edible-leaved (garland; <i>Chrysanthemum</i> ssp.)</p> <p>7 - Dandelion (<i>Taraxacum officinale</i>)</p> <p>8 - Endive (escarole, broad leaved endive; <i>Cichorium endivia</i> ssp. <i>endivia</i>)</p> <p>9 - Salsify (<i>Tragopogon porrifolius</i>)</p>	<p>o - Anthracnose (rust; <i>Microdochium panattonianum</i>, <i>Marssonina panattoniana</i>)</p> <p>p - Bacterial ice nucleation</p> <p>q - Bottom rot (<i>Rhizoctonia solani</i>)</p> <p>r - Damping-off (decay, seedling blight; <i>Rhizoctonia</i>, <i>Fusarium</i>)</p> <p>s - Damping-off (seedling blight, seedling disease, seed rot, seed decay; <i>Phytophthora</i>, <i>Pythium</i>)</p> <p>t - Downy mildew (<i>Bremia lactucae</i>)</p> <p>u - Drop (watery soft rot; <i>Sclerotinia sclerotiorum</i>, <i>S. minor</i>)</p> <p>v - Gray mold (rot; <i>Botrytis cinerea</i>)</p> <p>w - Leaf spot (<i>Cercospora longissima</i>)</p> <p>x - Plant parasitic nematodes (see label for species)</p> <p>y - Powdery mildew (<i>Erysiphe cichoracearum</i>)</p> <p>z - Viruses (see label for species)</p>

Ingredient	Trade Name&	Remarks&, #
A. Field Soil Treatment (see also pages 24-25)		
mefenoxam 48%	Ridomil Gold EC Novartis [2,3,5,8,9,s]	WARNING; 1*
25%	Ultra Flourish Agtrol [2,3,8,s]	WARNING; 1*
2.5%	Ridomil Gold GR Novartis [2,3,8,s]	CAUTION; 1*
B. Seed Treatment (see also page 25)		
fludioxonil 40%	Maxim 4FS Novartis [1-9,r,s]	CAUTION
thiram 50%	Thiram 50WP Dyed Gustafson [1-3,8,r,s]	CAUTION
C. Field Foliar Treatment (see also page 25)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [8,y]	CAUTION; 0+; 7-14 d int.; see Greenhouse Trt.
fatty acids 49%	M-Pede Mycogen [1-3,8,y]	WARNING; 0+; 7-14 d int.; see Greenhouse Trt.
dicloran 75%	Botran 75WSB Gowan [2,3,u,v] [8,v]	CAUTION; 14+; [8] 2*; [2,3] 5.3 lb*
46%	Botran 5F Gowan [2,3,u,v] [8,v]	CAUTION; 14+; [8] 2*; [2,3] 3.5 qt*
6%	Botran 6% D Wilbur-Ellis [2,u,v]	CAUTION; 14+; 7-10 d int.

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 # Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
 + Number of days from the last application until harvest (preharvest interval).
 * Maximum number of applications or maximum product amount per acre per season.

iprodione	50%	Rovral F, WG, WSP Rhône-Poulenc [2,3,q,u]	CAUTION (RF); WARNING (RWG, RSP); 14+; 3*; 10 d int.
	42%	Rovral 4 F Rhône-Poulenc [2,3,q,u]	CAUTION; 14+; 3*; 10 d int.
vinclozolin	50%	Ronilan DF, EG BASF [1-3,q,u]	CAUTION; 28+; 3*; 6 lb*; 14 d int.
fosetyl-aluminum	80%	Aliette WDG, WSP Rhône Poulenc [1-8,t]	CAUTION; 3+; 7*; 7-21 d int.; no copper mixture
fosetyl-aluminum and maneb	80% 75%	Aliette/Maneb 2+2 Rhône-Poulenc [2,3,8,t]	CAUTION; 10+; 6*; 7-10 d int.; no copper mixture
mancozeb, maneb	80%	Maneb 80WP Elf Atochem [2,3,8,t]	CAUTION; 12 lb*; 10+; 7-10 d int.
	75%	Maneb 75DF Elf Atochem [2,3,8,t]	CAUTION; 10+; 9.6 lb a.i.*; 7-10 d int.
	37%	Manex F with Zinc Griffin [2,3,8,t]	CAUTION; 10+; 9.6 qt*; 7-10 d int.
copper	53%	Basic Copper 53 Micro Flo [1-3,8,t]	WARNING; 0+; 7-10 d int.
	50%	C-O-C-S WDG Platte [2,3,t]	WARNING; 0+; 7-10 d int.
		Nu-Cop 50DF, Nu-Cop 50WP Micro Flo [1-3,8,p,t]	DANGER; 0+; (NWP) 3-7 d, (NDF) 3-10 d int.
	30%	Basic Copper 53 Micro Flo [1-3,8,t]	WARNING; 0+; 7-10 d int.
	24%	Champ Formula 2 F Agtrol [1,3,8,p,t]	CAUTION; 0+; 7-10 d int.
		Nu-Cop 3L Micro Flo; 3 Lb Copper F Helena [1-3,8,p,t]; KOP-Hydroxide Drexel [1-3,t]	WARNING (NC); DANGER (3L, KH); 0+; 7-10 d int.
	15%	Champ F Agtrol[1-3,8,p,y]	CAUTION; 0+; 7-10 d int.
sulfur + copper	50+8.4%	Top Cop With Sulfur F Stoller [1-3,o,t,w,y]	CAUTION; 0+; 7-10 d int.
sulfur	98%	D Sulfur Wilbur-Ellis [1-3,y]	CAUTION; 0+
	92%	Golden-Dew Wilbur-Ellis [1-3,o,y]	CAUTION; 0+; 14 d int.
	80%	Microthiol Special W Elf-Atochem [2,3,y]; Micro Sulf Agtrol [2,3,o,y]	CAUTION; 0+; 14 d int.
	52%	Sulfur 6L Micro Flo [2,3,o,y]; Sulfur F 6 Platte [2,3,y]	CAUTION; 0+; 14 d int.
potassium bicarbonate	85%	Armicarb 100 F, 100 WSP Church and Dwight [1-3,o,t,v,w,y]	CAUTION; 0+; 7-14 d int.
paraffinic oil	97%	JMS Stylet-Oil JMS Flower Farms [1-3,y,z]	CAUTION; see Greenhouse Trt.
D. Greenhouse Treatment (see also pages 25-26)			
<i>Ampelomyces quisqualis</i>	58%	AQ 10 Ecogen [8,y]	CAUTION; 0+; 7-14 d int.; see Field Foliar Trt.

Ingredient	Trade Name&	Remarks&, #
fatty acids 49%	M-Pede Mycogen [1-3,8,y]	WARNING ; 0+; 7-14 d int.; see Field Foliar Trt.
dicloran 75%	Botran 75WSB Gowan [3,v]	CAUTION ; 14+; 7 d after transplant; repeat at half mature
dicloran 75%	Botran 6% D Wilbur-Ellis [3,v]	CAUTION ; 14+; 7 d int.; same as above
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [1-3,y,z]	CAUTION ; see Field Foliar Trt.

MISCELLANEOUS PLANTS

Crop Codes

- 1 - **Amaranth** (AMARANTHACEAE *Amaranthus* spp.)
- 2 - **Artichoke, Chinese** (LAMIACEAE *Stachys affinis*)
- 3 - **Artichoke, globe** (ASTERACEAE *Cynara cardunculus*)
- 4 - **Artichoke, Jerusalem** (ASTERACEAE *Helianthus tuberosus*)
- 5 - **Cassava** (manioc; EUPHORBIACEAE *Manihot esculenta*)
- 6 - **Corn salad** (VALERIANACEAE *Valerianella eriocarpa*, *V. locusta*)
- 7 - **Dock** (POLYGONACEAE *Rumex patientia*)
- 8 - **Ginger** (ZINGIBERACEAE *Zingiber officinale*)
- 9 - **Ginseng** (ARALIACEAE *Panax quinquefolius*)
- 10 - **Orach** (CHENOPODIACEAE *Atriplex hortensis*)
- 11 - **Peppermint** (LAMIACEAE *Mentha x piperita* nothosp. *piperita*)
- 12 - **Purslane, garden** (PORTULACACEAE *Portulaca oleracea*)
- 13 - **Purslane, winter** (PORTULACACEAE *Claytonia perfoliata*)
- 14 - **Rhubarb** (POLYGONACEAE *Rheum x hybridum*)
- 15 - **Spearmint** (LAMIACEAE *Mentha spicata*)
- 16 - **Spinach, New Zealand** (AIZOACEAE *Tetragonia tetragonoides*)
- 17 - **Spinach, vine** (BASELLACEAE *Basella alba*)
- 18 - **Tanier spinach** (ARACEAE *Xanthosoma brasiliense*)
- 19 - **Yam** (DIOSCOREACEAE *Dioscorea* spp.)

Disease Codes

- o** - **Anthracnose**
- p** - **Bacterial ice nucleation**
- q** - **Damping-off** (*Rhizoctonia*, *Fusarium*)
- r** - **Downy mildew**
- s** - **Early season disease** (root rot; *Phytophthora*, *Pythium*)
- t** - **Gray mold** (blight, leaf rot; *Botrytis*)
- u** - **Leaf spot** (blight, stem blight; *Alternaria*)
- v** - **Phytophthora**
- w** - **Plant parasitic nematodes** (see label for species)
- x** - **Powdery mildew**
- y** - **Rhizoctonia**
- z** - **Wilt** (*Verticillium*)

A. Field Soil Treatment (see also pages 24-25)

dichloropropene + chloropicrin 61+35%	Telone C-35 Dow Agrosciences [11,15,w,z]	DANGER
dichloropropene + chloropicrin 78+17%	Telone C-17 Dow AgroSciences [11,15,w,z]	DANGER
dichloropropene 94%	Telone II Dow AgroSciences [11,15,w,z]	WARNING
metam-sodium 42%	Soil Prep IV Wilbur-Ellis; Vapam HL Amvac [11,15,w,z]	DANGER

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Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

33%	Soil-Prep III Wilbur-Ellis; Vapam Amvac [11,15,w,z]	DANGER
mefenoxam 48%	Ridomil Gold EC Novartis [4,5,8,9,14,18,19,s]	WARNING; 1*
25%	Ultra Flourish Agtrol [14,s]	WARNING; 1*
2.5%	Ridomil Gold GR Novartis [9,14,v]	CAUTION; [9] 4*, 60 lb*, 9+; [14] 1*
B. Field Foliar Treatment (see also page 25)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [2-4,11,15,x]	CAUTION; 0+; 7-14 d int.; transplant only; see Greenhouse Trt.
fatty acids 49%	M-Pede Mycogen [2-4,19,x]	WARNING; 0+; 7-14 d int.; see Greenhouse Trt.
fludioxonil 40%	Maxim 4FS Novartis [1,2,4-14,16,19,q]	CAUTION
fosetyl-aluminum 80%	Aliette WDG, WSP Rhône-Poulenc [9,s,u] [1,6,7,10,12-14,16,17,r]	CAUTION; 3+; 7*; 7-21 d int.; [9] 31+, 9*, 7 d int.; no mix with copper
iprodione 50%	Rovral F, WG, WSP Rhône-Poulenc [9,u]	CAUTION (RF); WARNING (RWG, RSP); 36+; 5* (alone); 10* (tank mix); 14 d (alone); 7-14 d (tank mix) int.
42%	Rovral 4 F Rhône-Poulenc [9,u]	CAUTION
copper 50%	Champion WP Agtrol; Kocide 101 WP Griffin; Nu-Cop 50DF, Nu-Cop 50WP Micro Flo [9,p,u]	DANGER; 0+; 7 d int.
40%	Kocide DF Griffin [9,p,u]	DANGER; 0+; 7 d int.
35%	Kocide 2000 Griffin [9,p,u]	DANGER; 0+; 7 d int.
24%	Nu-Cop 3L Micro Flo 3 Lb Copper F Helena [9,p,u]	WARNING (NC3); DANGER (3CF); 0+; 7 d int.
	Kocide 4.5LF Griffin; Champ Formula 2 F Agtrol [9,p,u]	CAUTION; 0+; 7 d int.
15%	Kocide LF Griffin; Champ F Agtrol [9,p,u]	CAUTION; 0+; 7 d int.
sulfur 98%	D Sulfur Wilbur-Ellis [2-4,u]	CAUTION; 0+; 7-10 d int.
92%	Golden-Dew Wilbur-Ellis [11,15,x]	CAUTION; 30+; 30 d int.
	Sulfur 90W Drexel [2-4,u] [11,15,x]	CAUTION; 0+; [2-4] 7-10 d int.; [11,15] twice at 30 d int.
80%	Kumulus DF BASF; Thiolux DF Micronized Sulfur Platte; Micro Sulf Agtrol [11,15,x]	CAUTION; 28+; 21 d int.; [TMS,MS] 30+; twice at 30 d int.
52%	Sulfur F 6 Platte; Sulfur 6L Riverside/Terra [3,u] [11,15,x]; Suffa Drexel [2-4,u] [11,15,x]	CAUTION; 0+; [2-4] 7-10 d int.; 30+ [11,15]; twice at 30 d int.

Ingredient	Trade Name&	Remarks&, #
	That F Sulfur Stoller [11,15,x]	CAUTION; 28+; 14 d int.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [11,15,x]	CAUTION; see Greenhouse Trt.
C. Greenhouse Treatment (see also page 25)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [2-4,11,15,x]	CAUTION; 0+; 7-14 d int.; transplant only; see Field Foliar Trt.
fatty acids 49%	M-Pede Mycogen [2-4,19,x]	WARNING; 0+; 7-14 d int.; see Field Foliar Trt.
dicloran 75%	Botran 75WSB Gowan [14,t]	CAUTION; 3+; as first buds emerge; 7 d int.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [11,15,x]	CAUTION; see Field Foliar Trt.
MUSHROOM AGARICACEAE <i>Agaricus</i> spp. (see also pages)		
		Disease Codes
		w - Cobweb (<i>Dactylium dendroides</i>) x - Dry bubble (spot; <i>Verticillium fungicola</i>) y - Green mold (<i>Trichoderma</i>) z - Wet bubble (<i>Mycogone perniciosa</i>)
benomyl 50%	Benlate F, SP DuPont [x]	CAUTION; 2+; 10 d int.
thiabendazole 42%	Mertect 340-F WDS Novartis [w-z]	CAUTION; 0.5 (12 hr)+; 4*
OKRA MALVACEAE <i>Abelmoschus esculentus</i>		
		Disease Codes
		v - Damping-off (early season disease; <i>Phytophthora</i> , <i>Pythium</i>) w - Damping-off (seedling blight, seedling disease, seed rot, seed decay; <i>Rhizoctonia</i> , other soil and seed fungi) x - Leaf spot (<i>Alternaria</i>) y - Plant parasitic nematodes (see label for species) z - Viruses (see label for species)
A. Field Soil Treatment (see also pages 24-25)		
fenamiphos 15%	Nemacur 15% G Bayer [y]	DANGER; 1*
B. Seed Treatment (see also page 25)		
metalaxyl 28%	Allegiance-FL Gustafson [v]	CAUTION
mefenoxam 32%	Apron XL LS Novartis [v]	WARNING
& Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading. # Signal words: CAUTION for slightly toxic; WARNING for moderately toxic; DANGER for highly toxic. + Number of days from the last application until harvest (preharvest interval). * Maximum number of applications or maximum product amount per acre per season.		

28%	Apron F Wilbur-Ellis [v]	CAUTION; commercial seed treater only
thiram 50%	Thiram 50WP Dyed Gustafson [v,w]	CAUTION
captan + lindane 12+25%	Seed Mate Isotex Seed Treater F Loveland Industries [v,w]	DANGER
sulfur 52%	That F Sulfur Stoller [x]	CAUTION; 0+; 14 d int.

C. Field Foliar Treatment (see also page 25)

paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [x,z]	CAUTION; see Greenhouse Trt.
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D. Greenhouse Treatment (see also pages 25-26)

paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [x,z]	CAUTION; see Field Foliar Trt.
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ONION and RELATIVES LILIACEAE *Allium* ssp.

Crop Codes	Disease Codes
----- <i>Allium cepa</i> ----- 1 - Onion, dry bulb (<i>A. cepa</i> var. <i>cepa</i>) 2 - Onion, green (<i>A. cepa</i> var. <i>cepa</i>) 3 - Onion, seed (<i>A. cepa</i> var. <i>cepa</i>) 4 - Shallot, dry bulb (<i>A. cepa</i> var. <i>aggregatum</i>) 5 - Shallot, green (green eschalot; <i>A. cepa</i> var. <i>aggregatum</i>) ----- <i>Other Allium species</i> --- 6 - Chive (<i>A. schoenoprasum</i>) 7 - Garlic (<i>A. sativum</i> var. <i>sativum</i>) 8 - Leek (<i>A. porrum</i>) 9 - Onion, Welsh (bunching, spring, scallion; <i>A. fistulosum</i>)	l - Bacterial blight (<i>Xanthomonas campestris</i>) m - Bacterial ice nucleation n - (Pythium) o - Damping-off (seedling blight, seedling disease, seed rot, seed decay; <i>Rhizoctonia</i> , other soil and seed fungi) p - Downy mildew (<i>Peronospora destructor</i>) q - Leaf blight (blast; <i>Botrytis squamosa</i>) r - Neck rot (<i>Botrytis allii</i> , <i>B. cinerea</i> , <i>B. porri</i>) s - Pink root (<i>Phoma terrestis</i>) t - Plant parasitic nematodes (see label for species) u - Powdery mildew (<i>Leveillula taurica</i>) v - Purple blotch (<i>Alternaria porri</i>) w - Seed storage loss x - Smut (<i>Urocystis colchici</i> , <i>U. cepulae</i>) y - Watery soft rot (<i>Sclerotinia sclerotiorum</i>) z - White rot (<i>Sclerotium cepivorum</i>)

A. Field Soil Treatment (see also pages 24-25)

iprodione 50%	Rovral F, WSP, WG Rhône-Poulenc [7,z]	CAUTION (RF); WARNING (RSP,RWG) 1*; 4.0 lb*; furrow
42%	Rovral 4 F Rhône-Poulenc [7,z]	CAUTION; 1*; 4.0 lb*; furrow
oxamyl 24%	Vydate L DuPont [1,t]	DANGER; 14+; 2.25 gal*; furrow or band
mefenoxam 48%	Ridomil Gold EC Novartis [1-9,n]	WARNING; 1*
PCNB 75%	PCNB 75% WP, PCNB 75% WSP Amvac; Terraclor 75% WP Uniroyal [7,z]	CAUTION; 21 lb a.i.*; (PCNB) 27.5 lb a.i.*
40%	Terraclor F Uniroyal [7,z]	CAUTION; 20 lb a.i.*

Ingredient	Trade Name&	Remarks&, #
24%	PCNB 2-E Liquid EC Amvac; Terraclor 2 Lb E Uniroyal [7,z]	WARNING ; 21 lb a.i.*
	PCNB 2 Spray Wilbur-Ellis [7,z]	CAUTION ; 1*
mancozeb, maneb 80%	Manzate 80WP Griffin [1,x]; Penncozeb 80WP, Maneb 80WP Elf Atochem [1-3,7,x]; Dithane M-45, WSP Rohm and Haas [1,n,o,x]	CAUTION ; (MZ80) 2.4 lb*; (P80,Maneb,D45,DWP) 3 lb*; furrow
75%	Manzate 75DF Griffin [1,x]; Maneb 75DF, Penncozeb 75DF Elf Atochem [1,2,x]; Dithane DF Rohm and Haas [1,n,o,x]	CAUTION ; (MZ75) 2.25 lb a.i.*; (Maneb,P75,DDF) 2.4 lb a.i.*; furrow
37%	Manex II F, Manex F With Zinc Griffin [1,x]; Dithane F-45 Rohm and Haas [1,n,o,x]	CAUTION ; 2.4 qt*; in- furrow
thiophanate- methyl 70%	Topsin M 70W, WSB Elf Atochem [1-3,9,z]	CAUTION ; furrow
dicloran 6%	Botran 6% D Wilbur-Ellis [1-3,7,9,z]	CAUTION ; incorporate or furrow
vinclozolin 50%	Ronilan DF, EG BASF [1-3,9,r,y,z]	CAUTION ; 18+; 10 lb*; see Field Foliar Trt.
B. Seed and Set Treatment (see also page 25)		
captan + lindane 12+25%	Seed Mate Isotex Seed Treater F Loveland Industries [1-3,9,n,o]	DANGER
captan 75%	Captan 75D, WDG Wilbur-Ellis [1-3,9,n,o]	DANGER ; pelleting and seeder box
38%	Captan 4000 Wilbur-Ellis [1-3,9,n,o,w]	DANGER ; pelleting
C. Field Foliar Treatment (see also page 25)		
<i>Ampelomyces</i> <i>quisqualis</i> 58%	AQ 10 Ecogen [6,u]	CAUTION ; 0+; 7-14 d int.; see Greenhouse Trt.
fatty acids 49%	M-Pede Mycogen [1-3,6-9,u]	WARNING ; 0+; 7-14 d int.; see Greenhouse Trt.
oxamyl 24%	Vydate L DuPont [1,t]	DANGER ; 14* 5-7 d int.
vinclozolin 50%	Ronilan DF, EG BASF [q,r,v,y,z]	CAUTION ; 18+; 5*; 10 lb*; 14 d int.; see Field Soil Trt.
iprodione 50%	Rovral F, WG, WSP Rhône-Poulenc [1,q,r,v]	CAUTION (F) ; WARNING (WG,SP) ; 7+; 5* (alone), 10* (tank mix); 14 d (alone), 7-10 d (tank mix) int.

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42%	Rovral 4 F Rhône-Poulenc [1,q,r,v]	CAUTION; 7+; 5*, 14 d (alone) int.; 10*, 7-14 d (tank mix) int.
dicloran 75%	Botran 75WSB Gowan [1-5,7,9,q,r,z]	CAUTION; 1*
47%	Botran 5F Gowan [1-5,7,9,q,r,z]	CAUTION; 1*
fosetyl-aluminum 80%	Aliette WDG [1,p,v], Aliette WSP Rhône-Poulenc [1,p]	CAUTION; 7+; 7*; 7-14 d int.; no copper mixture
fosetyl-aluminum and maneb 80% 75%	Aliette/Maneb 2+2 Rhône-Poulenc [1,p-r,v]	CAUTION; 7+; 7*; 7 d int.; no copper mixture
mancozeb, maneb 80%	Maneb 80WP Elf Atochem [1,2,p-r,v]	CAUTION; 7+; [1] 30 lb*; [2] 21 lb*; 7 d int.
	Manzate 80WP Griffin [1,p-r,v]; Dithane M-45, WSP Rohm and Haas; Penncozeb 80WP Elf Atochem [1,4,5,7,p-r,v,]	CAUTION; 7+; 30 lb*; 7 d int.
75%	Maneb 75DF Elf Atochem [1,2,p-r,v]	CAUTION; 7+; [1] 32 lb*; [2] 22.4 lb*; 7 d int.
	Penncozeb 75DF Elf Atochem [1,4,5,7,p-r,v]	CAUTION; 7+; 32 lb*; 7 d int.
	Manzate 75DF Griffin; Dithane DF Rohm and Haas [1,p-r,v]	CAUTION; 7+; (MZ75) 30 lb a.i.*; (DDF) 24 qt*; 7 d int.
37%	Manex F With Zinc Griffin [1,2,p-r,v]	CAUTION; 7+; [1] 24 qt*; [2] 16.8 qt*; 7 d int.
	Manex II F Griffin; Dithane F-45 Rohm and Haas [1,p-r,v]	CAUTION; 7+; 24 qt*; 7 d int.
mancozeb + copper 15+30%	ManKocide Griffin [1,1,m,p,q,v]	DANGER; 7+; 16 lb*; 7 d int.
mefenoxam + mancozeb 4+64%	Ridomil Gold MZ Novartis [1,4,7,p]	CAUTION; 7+; 4*; 24 lb a.i. mancozeb*; 14 d int.
chlorothalonil 90%	Terranil 90DF WSP, 90 DF Riverside/Terra [1,q,r,v] [2-5,7-9,p,q,v]	DANGER; [1,7] 7+; [2-5,8,9] 14+; 3*; 7 d (high rate), 7-10 d (low rate) int.
83%	Bravo Ultrex Zeneca [1,3,7,q,r,v]	DANGER; [1,7] 7+; 7-10 d int.
54%	Agronil 720 Helena; Terranil 6L Riverside/Terra; Bravo Weather Stik Zeneca [1,q,r,v] [2-5,7-9,p,q,v]	WARNING; [1,7] 7+; [2-5,8,9] 14+; [2-6,8] 3*; 7-10 d (low rate), 7 d (high rate) int.
40%	Agronil 500 [1,q,r,v] [2-5,7,8,g,n,q,v]; Bravo 500 Zeneca [1,q,r,v] [2-5,7,8,p,q,v]	WARNING; [1,8] 7+; [2-5,8] 14+, 3*; 7-10 d (low rate), 7 d (high rate) int.
mefenoxam + chlorothalonil 5+72%	Ridomil Gold Bravo WP Novartis [1-5,8,9,p,q,v]	DANGER; [1,4,7] 7+, 4* [2,3,5,8,9] 21+, 3*; [p] 14 d int.; [q,v] 7 or 14 d (alternate fungicide) int.
mefenoxam + copper 5+39%	Ridomil Gold Copper Novartis [1-5,8,9,p]	DANGER; [1,4,7] 10+, 4*; [2,3,5,8,9] 7+, 3*; 14 d int.

Ingredient	Trade Name&	Remarks&, #
copper 53%	Basic Copper Sulfate Drexel [1-3,9,p]; Basic Copper 53 [1-3,9,p,v], Microspense COC 53 WP [1-3,7-9,m,p,v] Micro Flo	WARNING (BCS,BC53); DANGER (MCOC); 0+; 7-10 d int.
50%	C-O-C-S WDG Platte [1-3,9,p,v] KOP-Hydroxide 50 WS Drexel; Nu-Cop 50WP Micro Flo [1-3,9,m,p,v]; Kocide 101 WP Griffin [1-3,9,m,p,v] [6,m,p]; Champion WP Agtrol [1-3,7,9,m,p,v] [6,m,p]; Nu-Cop 50DF Micro Flo [1-3,9,1,m,p,v] [6,m,p]	WARNING (COC); DANGER (KOP,NWP,K101,CWP,NDF); 0+; 7-10 int.
40%	Kocide DF Griffin [1-3,9,m,p,v] [6,m,p]	DANGER ; 0+; 7-10 d int.
35%	Kocide 2000 Griffin [1-3,9,1,m,p,v]	DANGER ; 0+; 7-10 d int.
30%	Top Cop Tri-Basic Stoller [1-3,9,m,p,v]	CAUTION ; 0+; 7-10 d int.
24%	KOP 300 F Copper F Drexel [1-3,9,p]; Kocide 4.5LF Griffin [1-3,7,9,1,m,p,v] [6,m,p]; Champ Formula 2 F Agtrol; Nu-Cop 3L Micro Flo [1-3,7-9, m,p,v] [6,m,p]; KOP-Hydroxide Drexel [1-3,9,p,v]; 3 Lb Copper F Helena [1-3,9,m,p,v] [6,m,p]	CAUTION (KOP3,K4.5,CF2F); WARNING (NC3); DANGER (KOP,3CF); 0+; 7-10 d int.
15%	Champ F Agtrol [1-3,9,m,p,v]; Kocide LF Griffin [1-3,9,p,v] [6,p]	CAUTION ; 0+; 7-10 d int.
sulfur + copper 50+8.4%	Top Cop With Sulfur F Stoller [1-3,9,p,v]	CAUTION ; 0+; 7-10 d int.
sulfur 99%	Commercial D Sulphur International Sulphur [1-3,9,p,q,u] [7,p,u]	CAUTION ; 0+
98%	D Sulfur Wilbur-Ellis [1-3,9,q,u] [7,p,u]	CAUTION ; 0+; [1-3,9] 14 d int.; [7] as needed
97%	Spray Sulfur Wilbur-Ellis [1-3,9,u]	CAUTION ; 0+
94%	Superfine W Sulphur International Sulphur [1-3,9,p,q,u] [7,p,u]	CAUTION ; 0+
92%	Golden-Dew Wilbur-Ellis [1-3,7,9,q,u]	CAUTION ; 0+
90%	Dual Spraying and D Sulfur, Microspense WS Micro Flo; Sulfur 90W Drexel [1-3,7,9,u]	CAUTION ; 0+
80%	Microthiol Special W Elf Atochem [1-4,7,9,u]; Kumulus DF BASF; Sulfur DF Wilbur-Ellis; Thiolux DF Micronized Sulfur Platte [1-3,7,9,u]	CAUTION ; 0+

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53%	EM-53 L Sulphur International Sulphur [1-3,9,u]	CAUTION; 0+
52%	Suffa Drexel [1-3,7,9,u]; Sulfur 6L MicroFlo, Riverside/Terra; Sulfur F 6 Platte [1-4,7,9,u]	CAUTION; 0+; as needed
D. Greenhouse Treatment (see also pages 25-26)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [6,u]	CAUTION; 0+; 7-14 d int.; transplant only; see Field Foliar Trt.
fatty acids 49%	M-Pede Mycogen [1-3,6-9,u]	WARNING; 0+; 7-14 d int.; see Field Foliar Trt.

PEPPER SOLANACEAE *Capsicum* ssp.

	Disease Codes
	l - post-harvest decay m - Anthracnose (ripe rot; <i>Colletotrichum</i> spp.) n - Bacterial ice nucleation o - Bacterial spot (<i>Xanthomonas campestris</i> pv. <i>vesicatoria</i>) p - Crown rot (blight, chili wilt; <i>Phytophthora capsici</i>) q - Damping-off (<i>Pythium</i>) r - Damping-off (seedling blight, seedling disease, seed rot, seed decay, root rot; <i>Rhizoctonia</i> , other soil and seed fungi) s - Early blight (<i>Alternaria solani</i>) t - Late blight (<i>Phytophthora infestans</i>) u - Leaf spot (frog-eye spot; <i>Cercospora capsici</i>) v - Plant parasitic nematodes (see label for species) w - Powdery mildew (<i>Leveillula taurica</i>) x - Seed storage loss y - Southern blight (<i>Sclerotium rolfsii</i>) z - Viruses (see label for species)

A. Field Soil Treatment (see also pages 24-25)

oxamyl 24%	Vydate L DuPont [v]	DANGER; 7+; 3 gal*; 14 d int.; see Field Foliar Trt.
mefenoxam 48%	Ridomil Gold EC Novartis [p,q]	WARNING; 7+; 3 pt*; 30 d int.
25%	Ultra Flourish Agtrol [p,q]	WARNING; 1*
PCNB 75%	PCNB 75WP, 75WSP Amvac; Terraclor 75WP Uniroyal [y]	CAUTION; rate varies with application
40%	Terraclor F Uniroyal [r,y]	CAUTION; 20 lb a.i.* transplant solution; 7.2 lb a.i.* furrow
10%	Terraclor 10% G Uniroyal [r]	CAUTION

B. Seed Treatment (see also page 25)

sodium hypo-chlorite 5.3%	Clorox Clorox Company [o]	WARNING; 1*; seed treatment; 40 minute agitation, air dry
captan 75%	Captan 75 Slurry, WDG, D Wilbur-Ellis [q,r]	DANGER

Ingredient	Trade Name&	Remarks&, #
38%	Captan 4000 Wilbur-Ellis; Captan 400 Gustafson [q,r,x]	DANGER
29%	Captan 30-DD Gustafson [q,r,x]	DANGER
thiram 50%	Thiram 50WP Dyed Gustafson [q,r]	CAUTION
C. Field Foliar Treatment (see also page 25)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [w]	CAUTION ; 0+; 7-14 d int.; see Greenhouse Trt.
fatty acids 49%	M-Pede Mycogen [w]	WARNING ; 0+; 7-14 d int.; see Greenhouse Trt.
oxamyl 24%	Vydate L DuPont [v]	DANGER ; 7+; 3 gal*; 7-14 d int.; see Field Soil Trt.
mancozeb, maneb 80%	Maneb 80WP Elf Atochem [m,t,u]	CAUTION ; 7+; 12 lb*; 7-10 int.
75%	Maneb 75DF Elf Atochem [m,t,u]	CAUTION ; 7+; 12.8 lb*; 7-10 d int.
37%	Manex F with Zinc Griffin [m,t,u]	CAUTION ; 7+; 9.6 qt*; 7-10 d int.
copper 53%	Basic Copper 53 Micro Flo; Basic Copper Sulfate Drexel; Basicop WP Griffin; [m,o,s-u]; Microspense COC 53 WP [n,o]	WARNING (B53,BCS,BWP); DANGER (MCOC); 0+; (BCS) 7 d, (B53, BWP) 7-10 d, (MCOC) 5-10 d int.
50%	C-O-C-S WDG Platte [m,s,t]; KOP-Hydroxide 50 WS Drexel; Champion WP Agtrol; Kocide 101 WP Griffin; Nu-Cop 50DF, Nu-Cop 50WP Micro Flo [n,o]	WARNING (COC); DANGER (KOP,CWP, K101,NDF,NWP); 0+; (K101,COC) 7-10, (KOP,CWP) 5-10 d, (NDF, NWP) 7-14 d int.
40%	Kocide DF Griffin [n,o]	DANGER ; 0+; 5-10 d int.
35%	Kocide 2000 Griffin [n,o]	DANGER ; 0+; 5-10 d int.
30%	Top Cop Tri-Basic Stoller [m-o,s,u]	CAUTION ; 0+; 7 d int.; fruiting season higher rate and volume
24%	Champ Formula 2 F Agtrol; Kocide 4.5LF Griffin; Nu-Cop 3L Micro Flo; 3 Lb Copper F Helena [n,o]; KOP 300 F Copper F [m,o,s-u]; KOP-Hydroxide Drexel [o]	CAUTION (CF2,K4.5); WARNING (NC3,KOP3); DANGER (KOPH, 3CF); 0+; (NC,3LC,KOPH) 7-14 d, (CF2,K4.5) 5-10 d, (KOP3) 7 d int.
15%	Kocide LF Griffin [o]; Champ F Agtrol [n,o]	CAUTION ; 0+; 5-10 d int.
mefenoxam + copper 5+39%	Ridomil Gold Copper Novartis [p,q]	DANGER ; 7+; 4*; 1.5 lb a.i.*; 10-14 d int.
copper + zinc 4+4%	Copper-Z 4/4 F Helena [o,u]	DANGER ; 0+; 7-10 d int.

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sulfur + copper 50+8.4%	Top Cop With Sulfur F Stoller [m,o,u]	CAUTION; 0+; 7-10 d int.
sulfur 99%	Commercial D Sulphur International Sulphur [w]	CAUTION; 0+; 7-10 d int.
98%	D Sulfur Wilbur-Ellis [w]	CAUTION; 0+; 7 d int.
94%	Superfine W Sulphur International Sulphur [w]	CAUTION; 0+; 7-14 d int.
92%	Golden-Dew Wilbur-Ellis [w]	CAUTION; 0+; as needed
90%	W Sulfur Helena; Sulfur 90W Drexel; Microperse WS Dual, Spraying and D Sulfur Micro Flo [w]	CAUTION; 0+; (WS,S90,MWS) 10-14 d, (SDS) 14 d int.
80%	Kumulus DF BASF; Sulfur DF Wilbur-Ellis; Thiolux DF Micronized Sulfur Platte; Microthiol Special W Elf-Atochem	CAUTION; 0+; (KDF,SDF,-TDF) 10- 14 d, (MSW) 14 d 21 d int.
52%	Sulfur F 6 Platte; Suffa Drexel; Sulfur 6L Riverside/Terra [w]; That F Sulfur Stoller [u,w]; Liquid Sulfur Six Helena [w]	CAUTION; 0+; 10-14, (LS6) d int.
potassium bicarbonate 85%	Armicarb 100 F, 100 WSP Church and Dwight [m,s-u,w]	CAUTION; 0+; 7-14 d int.
streptomycin sulfate 21%	Agri-mycin 17 WP Novartis [o]	CAUTION; 4-5 d int. until transplanted
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms[s,w,z]	CAUTION; see Greenhouse Trt.

D. Greenhouse Treatment (see also pages 25-26)

<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [w]	CAUTION; 0+; 7-14 d int.; transplant only; see Field Foliar Trt.
fatty acids 49%	M-Pede Mycogen [w]	WARNING; 0+; 7-14 d int.; see Field Foliar Trt.
PCNB 40%	Terraclor 400 Uniroyal [r]	CAUTION; container grown only
10%	Terraclor 10% G, Turfcide Uniroyal [r]	CAUTION; container grown only
copper 53%	Microperse COC 53 WP Micro Flo [q,r]	DANGER; 0+; 4-7 d int.
50%	Kocide 101 WP Griffin; Nu-Cop 50DF Micro Flo [n,o]	DANGER; 0+; 5-10 d int.
40%	Kocide DF Griffin [n,o]	DANGER; 0+; 5-10 d int.
35%	Kocide 2000 Griffin [n,o]	DANGER; 0+; 5-10 d int.
24%	Kocide 4.5LF Griffin [n,o]	CAUTION; 0+; 5-10 d int.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [s,w,z]	CAUTION; see Field Foliar Trt.

Ingredient	Trade Name&	Remarks&, #
E. Postharvest (see also page 26)		
orthophenyl-phenol 2.5%	Cucumber & Pepper Luster 223 F Elf-Atochem [1]	CAUTION
POTATO SOLANACEAE <i>Solanum tuberosum</i> ssp. <i>tuberosum</i>		
	Disease Codes	
	j - Bacterial ice nucleation k - Black leg (bacterial soft rot; <i>Erwinia carotovora</i> var. <i>atroseptica</i> , <i>E. carotovora</i> var. <i>carotovora</i>) l - Common scab (seedborne; <i>Streptomyces scabies</i>) m - Dry rot (tuber rot, seed piece decay; <i>Fusarium solani</i> , <i>F. roseum</i>) n - Early blight (<i>Alternaria solani</i>) o - Gray mold (vine rot, Botrytis blight; <i>Botrytis cinerea</i>) p - Late blight (field and storage tuber rot; <i>Phytophthora infestans</i>) q - Leak (field and storage tuber rot; <i>Pythium</i>) r - Pink rot (<i>Phytophthora erythroseptica</i>) s - Plant parasitic nematodes (see label for species) t - Post harvest protection (sanitation) u - Powdery mildew (<i>Erysiphe cichoracearum</i>) v - Silver scurf (<i>Helminthosporium solani</i>) w - Stem canker (black scurf, damping-off; <i>Rhizoctonia solani</i>) x - Verticillium wilt (<i>Verticillium dahliae</i> , <i>V. albo-atrum</i>) y - Viruses (see label for species) z - White mold (<i>Sclerotinia sclerotiorum</i>)	
A. Field Soil Treatment (see also pages 24-25)		
ethoprop 70%	Mocap EC Rhône-Poulenc [s]	DANGER; 1*; 12 lb a.i.*
10%	Mocap 10% G, Lock'n Load Rhône-Poulenc [s]	WARNING; 1*; 12 lb a.i.*
metam-sodium 42%	Soil-Prep IV Wilbur-Ellis [s]	DANGER
33%	Soil-Prep III Wilbur-Ellis [s]	DANGER
PCNB 24%	PCNB 2-E Liquid EC Amvac [w]	WARNING; 1*
10%	PCNB 10% G Amvac [w]	CAUTION
oxamyl 24%	Vydate L DuPont [s]	DANGER; 7+; 4.5 gal*; see Field Foliar Trt.
B. Seed Piece Treatment (see also page 25)		
fludioxonil 40%	Maxim 4FS Novartis [m,v,w]	CAUTION
0.5%	Maxim Potato Seed Protectant Novartis; Nubark Maxim Potato Seed Piece Treatment Wilbur-Ellis [m,v,w]	CAUTION

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fludioxonil + mancozeb 0.5+9.6%	Maxim MZ Potato Seed Protectant Novartis [m,v,w]	CAUTION
sodium hypo- chlorite 5.3%	Clorox Clorox Company [x]	WARNING; 1* ; plant within 4 hr or ventilate
thiophanate- methyl 5%	Tops 5 Gustafson; Tops 5 Platte [m,w]	CAUTION
2.5%	Tops 2.5D Gustafson, Platte [m,w]	CAUTION
thiophanate- methyl + mancozeb 3+6%	Tops MZ Gustafson [m,w]	CAUTION
maneb + streptomycin sulfate 8+0.01%	Seed Treatment for Potatoes LD Helena [k,n,w]	CAUTION
mancozeb, maneb 80%	Manzate 80WP Griffin; Dithane M-45, WSP Rohm and Haas [l,m]; Penncozeb 80WP, Maneb 80WP Elf Atochem [m]	CAUTION; dip whole or cut tubers
75%	Manzate 75DF Griffin; Dithane DF Rohm and Haas [l,m]; Maneb 75DF, Penncozeb 75DF Elf Atochem [m]	CAUTION; dip whole or cut tubers
37%	Manex II F, Manex F With Zinc Griffin; Dithane F-45, ST Rohm and Haas [l,m]	CAUTION; dip whole or cut tubers
6%	Nubark Mancozeb Wilbur-Ellis; Potato Seed Treater 6% Platte [m]	CAUTION
captan 10%	Captan 10 D, Nubark Captan 10 Wilbur- Ellis [m,w]	DANGER
8%	Captan 7.5 Dust Platte [m,w]	DANGER
5%	Captan D, Nubark Captan Wilbur-Ellis [m,w]	DANGER
	Captan 5% Potato Seed Treater Platte [m,w]	DANGER
thiabendazole 42%	Mertect 340-F WDS Novartis [m]	CAUTION; 2* ; entering storage; before shipping and cutting
0.5%	Nubark TBZ Wilbur-Ellis [m]	CAUTION; Russet Burbank variety
streptomycin sulfate 21%	Agri-mycin 17 Novartis [k]	CAUTION; soak cut seed pieces; also apply fungicide
C. Field Foliar Treatment (see also page 25)		
fatty acids 49%	M-Pede Mycogen [u]	WARNING; 0+; 7-14 d int.; see Greenhouse Trt.
oxamyl 24%	Vydate L DuPont [s]	DANGER; 7+; 4.5 gal*; 6*; 5-7 d int.; see Field Soil Trt.
azoxystrobin 30%	Quadris Zeneca [n,p]	CAUTION; 14+; 6*; 5-7 d int.
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Ingredient	Trade Name&	Remarks&, #
cymoxanil 60%	Curzate 60DF DuPont [p]	WARNING; 14+; 7*; use with mancozeb, chlorothalonil, or triphenyltin hydroxide
chlorothalonil 90%	Terranil 90DF, 90DF WSP Riverside/Terra [n-p]	DANGER; 7+; 7-10 d, 7 d (severe) int.
83%	Bravo Ultrex Zeneca [n-p]	DANGER; 7+; 14.5 lb*; 7-10 d, then 5-10 d int.
54%	Agronil 720 Helena; Bravo Weather Stik Zeneca; Terranil 6L Riverside/Terra [n-p]	WARNING; 7+; 16 pt*; 7-10 d, then 5-10 d int.
40%	Bravo 500 Zeneca [n-p]	WARNING; 7+; 23 pt*; 7-10 d, then 5-10 d int.
	Agronil 500 Helena [n-p]	WARNING; 0+; 7-10 d int.
39%	Terranil Zn Riverside/Terra; Bravo Zn Zeneca [n-p]	WARNING; 7+; (TZ) 21 pt*, (BZ) 23 pt*; (TZ,BZ) 7-10 d, then 5-10 d int.
propamocarb + chlorothalonil 31+31%	Tattoo C AgrEvo [p]	DANGER; 5+; 10-14 d int.; Section 18 Emergency Exemption
chlorothalonil + copper 24+14%	Terranil Cu Riverside/Terra [n-p]	DANGER; 7+; 36 pt*; 7-10 d then 5-10 d int.
sulfur + chlorothalonil 27+19%	Bravo S Helena; Terranil S Riverside/Terra [n-p,u]	CAUTION (BS); WARNING (TS); 0+; [n-p] 7-10 d, 7 d (severe), [u] 21 d int.
mefenoxam + chlorothalonil 5+72%	Ridomil Gold Bravo WP Novartis [n,p-r]	DANGER; 14+; 3*; 14 d int.
48%+54%	Ridomil Gold Bravo Liquid Twin-Pak Novartis [n,p-r]	CAUTION (Ridomil Gold); WARNING (Bravo); 14+; 3*; 14 d int.
mancozeb, maneb 80%	Dithane M-45, WSP Rohm and Haas; Penncozeb 80WP, Maneb 80WP Elf Atochem; Polyram 80DF Platte; Manzate 80WP Griffin [n,p]	CAUTION; 14+; 14 lb*; (D45,DWP) 3-10 d, (P80,Maneb,P80DF,MZ80) 5-10 d int.
75%	Dithane DF Rohm and Haas; Manzate 75DF Griffin; Penncozeb 75DF, Maneb 75DF Elf Atochem [n,p]	CAUTION; 14+; 15 lb*; (DF) 3-10 d, (MZ75,P75,Maneb) 5-10 d int.
37%	Dithane F-45 Rohm and Haas; Manex F With Zinc Griffin [n,p]	CAUTION; 14+; 11.2 qt*; (DF) 3-10 d, (MF) 5-10 d int.
mancozeb + dimethomorph 60+9%	Acrobat MZ American Cyanamid [p]	CAUTION; 14+; 5* Section 18 Emergency exemption
mefenoxam + mancozeb 4+64%	Ridomil Gold MZ Novartis [p-r]	CAUTION; 14+; 3*; 11.2 lb a.i. mancozeb*; 14 d int.

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Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

mefenoxam + copper 5+39%	Ridomil Gold Copper Novartis [p-r]	DANGER ; 14+; 3*; 14 d int.
mancozeb + copper 15+30%	ManKocide Griffin [j,n,p]	DANGER ; 14+; 74.7 lb*; 7-10 d int.
maneb + triphenyltin hydroxide 33+5%	Pro-tex Griffin [n,p]	DANGER ; 21+; 6 qt*; 7 d int.
triphenyltin hydroxide 80%	Super Tin 80 WP Griffin [n,p]	DANGER ; 21+; 15 oz*; 7 d int.
iprodione 50%	Rovral F, WG, WSP Rhône-Poulenc [n,z]	CAUTION (F); WARNING (WG,WP) ; 14+; 4*; [n] 10-14 d, [z] 14-21 d int.; (WG,WP) [z] not by air
42%	Rovral 4 F Rhône-Poulenc [n,z]	CAUTION ; 14+; 4*; [n] 10-14 d, [z] 14-21 d int.
copper + zinc 4+4%	Copper-Z 4/4 F Helena [n,p]	DANGER ; 0+; 7-10 d int.
copper 53%	Basicop WP Griffin; Basic Copper Sulfate Drexel; Basic Copper 53 [n,p]; Microspense COC 53 WP Micro Flo [j,n,p];	WARNING (BWP,BCS,BC53); DANGER (MCOC) ; 0+; 7-10 d, (MCOC) 4-10 d int.
50%	C-O-C-S WDG Platte [n,p]; Champion WP Agtrol; KOP-Hydroxide 50 WS Drexel [j,n,p];	WARNING (COC); DANGER (CWP,KOP) ; 0+; 7-10 d, (CWP) 5-10 d int.
	Nu-Cop 50WP, Nu-Cop 50DF Micro Flo; Kocide 101 WP Griffin [j,n,p]	DANGER ; (NWP) 0+; (NDF,K101) 14+; 7-10 d int.
40%	Kocide DF Griffin [j,n,p]	DANGER ; 14+; 7-10 d int.
35%	Kocide 2000 Griffin [j,n,p]	DANGER ; 0+; 7-10 d int.
30%	Top Cop Tri-Basic Stoller [j,n,p]	CAUTION ; 0+; 7-10 d int.
25%	Tennessee Brand Copper Sulfate Instant, Blue Viking Copper Sulfate Instant Griffin [p]	DANGER ; 7+; as needed
24%	Kocide 4.5LF Griffin; Champ Formula 2 F Agtrol [j,n,p]	CAUTION ; 0+; 3-10 d int.
	Nu-Cop 3L Micro Flo; 3 Lb Copper F Helena [j,n,p]; KOP-Hydroxide Drexel [n,p]	WARNING (NC3); DANGER (3CF,KOP) ; 14+; 7-10 d int.
	KOP 300 F Copper F Drexel [n,p]	WARNING ; 0+; 7-10 d int.
15%	Champ F Agtrol [j,n,p]; Kocide LF Griffin [n,p]	CAUTION ; 0+; 7-10 d int.
sulfur + copper 50+8.4%	Top Cop with Sulfur F Stoller [n,p]	CAUTION ; 0+; 7-10 d int.
sulfur 99%	Commercial D Sulphur International sulphur [u]	CAUTION ; 0+; 7-10 d int.
98%	D Sulfur Wilbur-Ellis [u]	CAUTION ; 0+; 7-10 d int.

Ingredient	Trade Name&	Remarks&, #
97%	Spray Sulfur Wilbur-Ellis [u]	CAUTION ; 0+; 21-28 d int.
sulfur 94%	Superfine W Sulphur International Sulphur [u]	CAUTION ; 0+; 7-14 d int.
92%	Golden-Dew Wilbur-Ellis [u]	CAUTION ; 0+; 14 d int.
90%	W Sulfur Helena; Microspurse WS Micro Flo [u]; Sulfur 90W Drexel [n,u]	CAUTION ; 0+; 10-14 d, (S90) 21-28 d int.
81%	Ben-Sul Spray Wilbur-Ellis [u]	CAUTION ; 0+; 21 d int.
80%	Kumulus DF BASF, Sulfur DF Wilbur-Ellis; Thiolux DF Micronized Sulfur Platte Microthiol Special W ; Elf Atochem; Micro Sulf Agtrol; [u]	CAUTION ; 0+; (KD,SD,TM) 10-14 d, (MSW,MS) 14 d int.
53%	EM-53 L Sulphur International Sulphur [u]	CAUTION ; 0+; as needed
sulfur 52%	Sulfur F 6 Platte; Sulfur 6L Micro Flo; Riverside/Terra; That F Sulfur Stoller; Liquid Sulfur Six Helena [u]; Suffa Drexel [n,u]	CAUTION ; 0+; (SF,S6L) 10-14 d, (TF) 14 d, (LS,Suffa) 21 d int.
potassium bicarbonate 85%	Armcarb 100 F, 100 WSP Church and Dwight [n-p,u]	CAUTION ; 0+; 7-14 d int.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [n,y]	CAUTION ; see Greenhouse Trt.
D. Greenhouse Treatment (see also pages)		
fatty acids 49%	M-Pede Mycogen [u]	WARNING ; 0+; 7-14 d int.; see Field Foliar Trt.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [n,y]	CAUTION ; see Field Foliar Trt.
E. Postharvest Treatment (see also page 26)		
sodium hypochlorite 10%	Dixichlor DPC Industries [t]	DANGER
chlorine dioxide 5%	Anthium AGP International Dioxide [p]	CAUTION ; entering storage or humidifying water; activate with food-grade acid before diluting; Section 18 Emergency Exemption
thiabendazole 99%	Decco Salt No.19 Elf-Atochem [m]	CAUTION ; mist conveyor line; before storage, shipping
42%	Mertect 340-F WDS Novartis [m]	CAUTION ; 2*; entering storage; before shipping

& Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
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+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

SPINACH

CHENOPODIACEAE *Spinacia oleracea*

Disease Codes

- p - Anthracnose (*Colletotrichum dematium* f. sp. *spinaciae*)
- q - Bacterial ice nucleation
- r - Black leaf spot (*Alternaria*)
- s - Damping-off (*Pythium*)
- t - Damping-off (seedling blight, seedling disease, seed rot, seed decay; *Rhizoctonia*, other soil and seed fungi)
- u - Downy mildew (blue mold; *Peronospora farinosa* f. sp. *spinaciae*)
- v - Leaf spot (*Cercospora beticola*)
- w - Plant parasitic nematodes (see label for species)
- x - Seed storage loss
- y - White rust (*Albugo occidentalis*)
- z - Wilt (*Fusarium oxysporum* f. sp. *spinaciae*)

Ingredient

Trade Name&

Remarks&, #

A. Field Soil Treatment (see also pages 24-25)

mefenoxam	48%	Ridomil Gold EC Novartis [s,u,y]	WARNING; 21+; 1.4 lb a.i.*; [u,y] 21 d int.
	25%	Ultra Flourish Agtrol [s,u,y]	WARNING; 1*
	2.5%	Ridomil Gold GR Novartis [s,u,y]	CAUTION; 21+; 3*; [u,y] 21 d int.

B. Seed Treatment (see also page 25)

metalaxyl	28%	Allegiance-FL Gustafson [s]	WARNING
thiram	50%	Thiram 50WP Dyed Gustafson [s,t]	CAUTION
captan + lindane	12+25%	Seed Mate Isotex Seed Treater F Loveland Industries [s,t]	DANGER
captan	75%	Captan 75 Slurry, WDG, D Wilbur-Ellis [s,t]	DANGER
	38%	Captan 4000 Wilbur-Ellis, Captan 400 Gustafson [s,t,x]	DANGER
	29%	Captan 30-DD Gustafson [s,t,x]	DANGER
benomyl	50%	Benlate F, SP DuPont [z]	CAUTION; slurry

C. Field Foliar Treatment (see also page 25)

mefenoxam + copper	5+39%	Ridomil Gold Copper Novartis [u,y]	DANGER; 21+; 2*; 14 d int.
sulfur + copper	50+8.4%	Top Cop with Sulfur F Stoller [u,v,y]	CAUTION; 0+; 7-10 d int.
copper	53%	Basicop WP Griffin; Micro Flo; Basic Copper Sulfate Drexel; Basic Copper 53 Micro Flo [p,u,v,y]	WARNING; 0+; 7-10 d int.
	50%	C-O-C-S WDG Platte [u,v]; Kocide 101 WP Griffin [p-r,u,v,y]; Nu-Cop 50DF, Nu-Cop 50WP Micro Flo [p,q,u,v, y] Champion WP Agtrol [p-r,u,v,y]	WARNING (COC); DANGER (K101, NDF,NWP,CWP); 0+; 7-10 d int.

Ingredient	Trade Name&	Remarks&, #
40%	Kocide DF Griffin [p,q,u,v,y]	DANGER; 0+; 7-10 d int.
35%	Kocide 2000 Griffin [p,q,u,v,y]	DANGER; 0+; 7-10 d int.
30%	Top Cop Tri-Basic Stoller [p,q,u,v,y]	CAUTION; 0+; 7-10 d int.
24%	Champ Formula 2 F Agtrol; Kocide 4.5LF Griffin; Nu-Cop 3L Micro Flo; 3 Lb Copper F Helena [p,q,u,v,y]; KOP 300 F Copper F Drexel [p,u,v,y]	CAUTION (CF2,K4.5); WARNING (NC3,KOP); DANGER (3CF); 0+; 7-10 d int.
15%	Champ F Agtrol [p,q,u,v,y]; Kocide LF Griffin [u]	CAUTION; 0+; 7-10 d int.
fosetyl-aluminum 80%	Aliette WDG [u,y], WSP [u] Rhone-Poulenc	CAUTION; 3+; 7*; 7-21 d int.; no copper mixture
sulfur 98%	D Sulfur Wilbur-Ellis [y]	CAUTION; 0+; 7-10 d int.
90%	Sulfur 90W Drexel [y]	CAUTION; 0+; 7-10 d int.
52%	Sulfur F 6 Platte; Sulfur 6L Riverside/Terra; Suffa Drexel [y]	CAUTION; 0+; 7-10 d int.

SWEETPOTATO CONVOLVULACEAE *Ipomoea batatas* var. *batatas*

Disease Codes

- p - Black rot (*Ceratocystis fimbriata*)
- q - Damping-off (seedling blight, soil-borne fungi; *Rhizoctonia*, other soil and seed fungi)
- r - Foot rot (*Plenodomus destruens*)
- s - Leaf spot (*Alternaria*, *Cercospora bataticola*, *Phyllosticta batatus*, *Septoria bataticola*)
- t - Mottle necrosis (*Pythium ultimum*, *P. scleroteichum*)
- u - Phytophthora
- v - Plant parasitic nematodes (see label for species)
- w - Scurf (*Monilochaetes infuscans*)
- x - Soft rot (postharvest decay; *Rhizopus nigicans*, *R. oryzae*)
- y - Soil rot (soil pox; *Streptomyces ipomoea*)
- z - Southern blight (sclerotial blight; *Sclerotium rolfsii*)

A. Field Soil Treatment (see also pages 24-25)

oxamyl 24%	Vydate L DuPont [v]	DANGER; 3 gal*
ethoprop 70%	Mocap EC Rhône-Poulenc [v]	DANGER; 1*
10%	Mocap 10% G, Lock'n Load Rhône-Poulenc [v]	WARNING; 1*
aldicarb 15%	Temik 15G, Lock'n Load, CP Rhône-Poulenc [v]	DANGER; 120+; 1*; 20 lb*; at plant
mefenoxam 48%	Ridomil Gold EC Novartis [t,u]	WARNING; 1*

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+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

B. Plant Bed and "Seed Roots" Treatment (see also page 25)

fludioxonil 40%	Maxim 4FS Novartis [q]	CAUTION
thiabendazole 42%	Mertect 340-F WDS Novartis [p,r,w]	CAUTION
dicloran 75%	Botran 75% Gowan [w,z]	CAUTION; dip or spray

C. Field Foliar Treatment (see also page 25)

potassium bicarbonate 85%	Armicarb 100 F, 100 WSP Church and Dwight [s]	CAUTION; 0+; 7-14 d int.
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D. Postharvest Treatment (see also page 26)

dicloran 75%	Botran 75% Gowan [x]	CAUTION
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TOMATO SOLANACEAE *Lycopersicon esculentum* var. *esculentum*

Disease Codes	
d	- Anthracnose (<i>Colletotrichum</i>)
e	- Bacterial canker (<i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i>)
f	- Bacterial ice nucleation
g	- Bacterial speck (<i>Pseudomonas syringae</i> pv. <i>tomato</i>)
h	- Bacterial spot (<i>Xanthomonas capestris</i> pv. <i>vesicatoria</i>)
i	- Damping-off (root, stem and fruit rot; <i>Phytophthora</i> , <i>Pythium</i>)
j	- Damping-off (seedling blight, seedling disease, seed rot, seed decay, root rot, basal stem rot, foot rot, stem canker, fruit rot <i>Fusarium</i> , <i>Rhizoctonia</i>)
k	- Early blight (nail head rust; <i>Alternaria solani</i>)
l	- Gray leaf spot (<i>Stemphylium</i>)
m	- Gray mold (stem canker, ghost spot; <i>Botrytis</i>)
n	- Late blight (fruit rot; <i>Phytophthora infestans</i>)
o	- Leaf mold [gray leaf mold; <i>Fulvia fulva</i> (syn. <i>Cladosporium fulvum</i>)]
p	- Leaf mold (leaf spot; <i>Cercospora</i>)
q	- Leaf spot (<i>Septoria lycopersici</i>)
r	- Plant parasitic nematodes (see label for species)
s	- Powdery mildew (<i>Leveillula taurica</i>)
t	- Rot (leaf spot; <i>Phoma destructiva</i>)
u	- Seed storage loss
v	- Southern blight (<i>Sclerotium rolfsii</i>)
w	- Stem canker (black mold; <i>Alternaria alternata</i> f. sp. <i>lycopersici</i>)
x	- Target spot (<i>Corynespora cassiicola</i>)
y	- Viruses (see label for species)
z	- White mold (<i>Sclerotinia</i>)

A. Field Soil Treatment (see also pages 24-25)

mefenoxam 48%	Ridomil Gold EC Novartis [i]	WARNING; 28+; 3*; 3 pt*
25%	Ultra Flourish Agtrol [i]	WARNING; 1*
2.5%	Ridomil Gold GR Novartis [i]	CAUTION; 7+; 3*; 40 pt*
PCNB 75%	Terraclor 75WP Uniroyal; PCNB 75WP, 75WSP Amvac [v]	CAUTION
40%	Terraclor F Uniroyal [v]	CAUTION; 21 lb a.i.*

B. Seed Treatment (see also page 25)

captan 29%	Captan 30-DD Gustafson [i,j,u]	DANGER
sodium hypo- chlorite 5.3%	Clorox Clorox Company [e]	WARNING; 1*; seed treatment; 40 minute agitation, air dry

Ingredient	Trade Name&	Remarks&, #
thiram 50%	Thiram 50WP Dyed Gustafson [i,j]	CAUTION
mancozeb, maneb 80%	Dithane M-45, WSP Rohm and Haas; Penncozeb 80WP Elf Atochem [i,j]	CAUTION
75%	Manzate 75DF Griffin; Dithane DF Rohm and Haas; Penncozeb 75DF Elf Atochem [i,j]	CAUTION
37%	Manex II F, Manex F With Zinc Griffin; Dithane F-45, ST Rohm and Haas [i,j]	CAUTION
C. Field Foliar Treatment (see also page 25)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [s]	CAUTION; 0+; 7-14 d int.; see Greenhouse Trt.
fatty acids 49%	M-Pede Mycogen [s]	WARNING; 0+; 7 d int. or 7-14 d int.; see Greenhouse Trt.
oxamyl 24%	Vydate L DuPont [r]	DANGER; 1+; 6 gal*; 7-14 d int.
azoxystrobin 30%	Quadris Zeneca [d,i,k,n,q,s,w,x]	CAUTION; 0+; 1.15 qt*; 21 d after transplant or 35 d after seeding; 7-14 d, [n] 5-7 d int.
ziram 76%	Ziram Granuflo UCB Chemicals; Ziram 76DF Elf Atochem [d,k,q]	DANGER; 7+; 24 lb*; 7-14 d int.; not on cherry tomato
mancozeb, maneb 80%	Dithane M-45, WSP Rohm and Haas [d,g,h,k,l,n-q]; Penncozeb 80WP Elf Atochem [d,k,l,n,o,q]	CAUTION; 5+; 8 lb*; 7-10 d int.
	Manzate 80WP Griffin; Maneb 80WP Elf Atochem [d,k,l,n,o,q]	CAUTION; 5+; 8 lb*; 7-10 d int.
75%	Dithane DF Rohm and Haas [d,g,h,k,l,n-q]; Manzate 75DF Griffin; Maneb 75DF, Penncozeb 75DF Elf Atochem [d,k,l,n,o,q]	CAUTION; 5+; 8.5 lb*; 7-10 d int.
37%	Manex II F, Manex F with Zinc Griffin [d,k,l,n,o,q]; Dithane F-45 Rohm and Haas [d,g,h,k,l,n-q]	CAUTION; 5+; 6.4 qt*; 7-10 d int.
mancozeb + copper 15+30%	ManKocide Griffin [d,f-h,k,l,n-q]	DANGER; 5+; 42.66 lb*; 7-10 d int.
mefenoxam + mancozeb 4+64%	Ridomil Gold MZ Novartis [n]	CAUTION; 5+; 3*; 6.4 lb a.i. mancozeb*; 14 d int.; alternate with protectant fungicide
chlorothalonil 90%	Terranil 90DF, 90DF WSP Riverside/Terra [d-o,q,w,x]	DANGER; 0+; [k,l,o,q,x] 7-10 d (foliage), [d,j,m,n,w] 7-14 d (fruit) int.

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83%	Bravo Ultrex Zeneca [d,j-o,q,w,x]	DANGER ; 0+; [k,l,o,qx] 7-10 d (foliage), [d,j,m,n,w] 7-14 d (fruit) int.
54%	Bravo Weather Stik Zeneca; Terranil 6L Riverside/Terra [d,j-o,q.w.x]	WARNING ; 0+; [k,l,o,q,x] 7-10 d (foliage), [d,j,m,n,w] 7-14 d (fruit) int.
	Agronil 720 Helena [d,j-o,q,x]	WARNING ; 0+; [k,l,n,o,q,x] 7-10 d (foliage), [d,m,n,w] 7-14 d (fruit) int.
40%	Bravo 500 Zeneca; Agronil 500 Helena [d,j-o,q,x]	WARNING ; 0+; [k,l,n,o,q,x] 7-10 d (foliage), [d,m,n,w] 7-14 d (fruit) int.
chlorothalonil + copper 24+14%	Terranil Cu Riverside/Terra [d,j-o,q,w,x]	DANGER ; 0+; [k,l,o,q,x] 7-10 d (foliage), [d,j,m,n,w] 7-14 d (fruit) int.
mefenoxam + chlorothalonil 4.5+72%	Ridomil Gold Bravo WP Novartis [d,j,k,m-q,w]	DANGER ; 14+; 3*; 14 d int.
sulfur + chlorothalonil 27+19%	Bravo S Helena [d,j-o,q]	CAUTION ; 0+; 7-10 d int.
	Terranil S Riverside/Terra [d,j-o,q,w,x]	WARNING ; 0+; [k,l,o,q,x] 7-10 d (foliage), [d,j,m,n,w] 7-14 d (fruit) int.
benomyl 50%	Benlate F, SP DuPont [m,o,p,t,x,z]	CAUTION ; 1+; 5 lb*; 7-14 d int.; do not use Benlate only
fosetyl- aluminum 80%	Aliette WDG, WSP Rhône-Poulenc [i]	CAUTION ; 14+; 20 lb*; 7-14 d int.; no copper mixture
fosetyl- aluminum 80% and maneb 75%	Aliette/Maneb 2+2 Rhône-Poulenc [d,i,k,l,n,o,q]	CAUTION ; 14+; 16 lb*; 7-10 d int.; no copper mixture
mefenoxam + copper 5+39%	Ridomil Gold Copper Novartis [i,n]	DANGER ; 14+; 3*; 1.5 lb a.i. mefenoxam*; 14 d int.; alternate with protectant fungicide
copper + zinc 4+4%	Copper-Z 4/4 F Helena [h,k]	DANGER ; 0+; 4-5 d (seed bed), 7 d (field) int.
copper 53%	Microspense COC 53 WP Micro Flo [d,f-h,k,n,o,q]	DANGER ; 0+; 5-7 d (seed bed), 4-7 d (field) int.
	Basicop WP Griffin [d,e,g,k,n,q]; Basic Copper 53 Micro Flo [d,e,g,h,j-l,n-q]; Basic Copper Sulfate Drexel [d,h,k,l,n-q]	WARNING ; 0+; 7-10 d int.
50%	C-O-C-S WDG Platte [k,n,q]; Nu-Cop 50WP [d,f-h,k,l], Nu-Cop 50DF Micro Flo; KOP-Hydroxide 50 WS Drexel; Kocide 101 WP Griffin [d,f-h,k,n,o,q]	WARNING (COC); DANGER (NWP,NDF,K101,KOP) ; 0+; 7-10 d; [g] 10-30 d int.
40%	Kocide DF Griffin [d,f-h,k,n,o,q]	DANGER ; 0+; 7-10 d, [g] 10-30 d int.

Ingredient	Trade Name&	Remarks&, #
35%	Kocide 2000 Griffin [d,f-h,k,n,o,q]	DANGER ; 0+; 7-10 d int.
30%	Top Cop Tri-Basic Stoller [d-f,h,k,l,n-q]	CAUTION ; 0+; 7-10 d int.
24%	Kocide 4.5LF Griffin; Champ Formula 2 F Agtrol [d,f-h,k,n,o,q]; Nu-Cop 3L Micro Flo [d,f-h,l,n,o,q] KOP 300 F Copper F [a,d,h,k,l,n-q], KOP-Hydroxide Drexel [g,h,k]; 3 Lb Copper F Helena [d,f-h,k,l,n,o,q]	CAUTION (K4.5,CF2); WARNING (NC3,KOP3); DANGER (KOPH,3CF) 0+; 7-10 d, [g] 10-30 d int.
15%	Champ F Agtrol [d,f-h,k,o,q]; Kocide LF Griffin [d,g,h,k,n,o,q]	CAUTION ; 0+; 7-10 d, [g] 10-30 d int.
sulfur + copper 50+8.4%	Top Cop with Sulfur F Stoller [d,g,h,k,n,q,s]	CAUTION ; 0+; 5-10 d int.
sulfur 98%	D Sulfur Wilbur-Ellis [s]	CAUTION ; 0+
92%	Golden-Dew Wilbur-Ellis [s]	CAUTION ; 0+
80%	Microthiol Special W Elf-Atochem; Thiolux DF Micronized Sulfur Platte; Micro Sulf Agtrol [s]	CAUTION ; 0+
52%	Sulfur F 6 Platte; Sulfur 6L Riverside/Terra [s]	CAUTION ; 0+
potassium bicarbonate 85%	Armicarb 100 F, 100 WSP Church and Dwight [d,k,m,n,q,s,t]	CAUTION ; 0+; 7-14 d int.
streptomycin sulfate 21%	Agri-mycin 17 WP Novartis [h]	CAUTION ; 4-5 d int. until transplant
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [k,s,y]	CAUTION ; see Greenhouse Trt.
D. Greenhouse Treatment (see also pages 25-26)		
<i>Ampelomyces quisqualis</i> 58%	AQ 10 Ecogen [s]	CAUTION ; 0+; 7-14 d int.; transplant only; see Field Foliar Trt.
fatty acids 49%	M-Pede Mycogen [s]	WARNING ; 0+; 7-14 d int.; see Field Foliar Trt.
mancozeb, maneb 75%	Maneb 75DF Elf Atochem [d,k,l,n,o,q]	CAUTION ; 5+; 8.5 lb*; 7-10 d int.
37%	Manex F with Zinc Griffin [d,k,l,n,o,q]	CAUTION ; 5+; 6.4 qt*; 7-10 d int.
dicloran 75%	Botran 75WSB Gowan [m]	CAUTION ; 14+; 4*; 7 d int.
6%	Botran 6% D Wilbur-Ellis [m]	CAUTION ; 10+; 4*; 7 d int.

& Crop codes (numbers) and disease codes (alphabet) in brackets are defined for each crop heading.
Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
+ Number of days from the last application until harvest (preharvest interval).
* Maximum number of applications or maximum product amount per acre per season.

chlorothalonil 20%	Exotherm Termil Sureco [k-o]	DANGER; 0+; 7 d int.
PCNB 40%	Terraclor 400 Uniroyal [j]	CAUTION; container grown
10%	Terraclor 10% G Uniroyal [j]	CAUTION; container grown
<i>Trichoderma</i> <i>harzianum</i> 1.2%	Bio-Trek 22G [i,z], Bio-Trek Nursery Drench Wilbur-Ellis [i,j]	CAUTION
copper 53%	Microspense COC 53 WP Micro Flo [i,j]	DANGER; 0+; 4-7 d int.
50%	Kocide 101 WP Griffin; Nu-Cop 50DF Micro Flo [d,f-h,k,n,o,q]	DANGER; 0+; 7-10 d, [g] 10-30 d int.
40%	Kocide DF Griffin [d,f-h,k,n,o,q]	DANGER; 0+; 7-10 d int.
35%	Kocide 2000 Griffin [d,f-h,k,n,o,q]	DANGER; 0+; 7-10 d int.
24%	Kocide 4.5LF Griffin [d,f-h,k,n,o,q]	CAUTION; 0+; 7-10 d int.
paraffinic oil 97%	JMS Stylet-Oil JMS Flower Farms [k,s,y]	CAUTION; see Field Foliar Trt.

MANUFACTURERS AND DISTRIBUTORS OF DISEASE CONTROL PRODUCTS

Abbott Laboratories
1401 Sheridan Road
North Chicago, IL 60064
Ph. (800) 323-9597

AgrEvo USA Co.
Little Falls Centre One
2711 Centerville Road
Wilmington, DE 19808
Ph. (302) 892-3000

Agrol Chemical Products
7322 SW Freeway, Suite 1400
Houston, TX 77074
Ph. (713) 995-0111

American Cyanamid Co.
One Campus Drive
Parsippany, NJ 07054-4492
Ph. (973) 683-2000
(800) 327-4645

Amvac Chemical Corp. (see BASF)
4695 MacArthur Court, Suite 1250
Newport Beach, CA 92660
Ph. (949) 260-1212

BASF Corp.
P.O. Box 13528
Research Triangle Park, NC 27709-3528
Ph. (800) 874-0081
(919) 547-2000

Bayer Corp.
Box 4913
Kansas City, MO 64120-0013
Ph. (800) 842-8020

Church and Dwight Co., Inc.
469 North Harrison St.
Princeton, NJ 08543-6297
Ph. (609) 683-5900

Clorox Services Co.
P.O. Box 493
Pleasanton, CA 94566-0803
Ph. (510) 847-6100

Dow AgroSciences
9330 Zionsville Rd.
Indianapolis, IN 46268-1054
Ph. (800) 258-3033

DPC Industries, Inc.
1919 Jacintoport blvd.
P.O. Box 24600
Houston, TX 77229
Ph. (281) 457-4888

Drexel Chemical Co.
P.O. Box 13327
Memphis, TN 38113-0327
Ph. (901) 774-4370

Du Pont Agric. Products
Walkers Mill, Barley Mill Plaza
P.O. Box 80038
Wilmington, DE 19880-0038
Ph. (888) 638-7668

Ecogen Inc.
2005 Cabot Blvd. West, #170
Langhorne, PA 19047-1181
Ph. (215) 757-1590
(800) 220-2135

Elf Atochem North America Inc.
2000 Market St., 21st Floor
Philadelphia, PA 19103-3222
Ph. (215) 419-7000

Gowan Co.
P.O. Box 5569
Yuma, AZ 85366-5569
Ph. (520) 783-8844

Great Lakes Chemical Co.
One Great Lakes Blvd.
P.O. Box 2200
W. Lafayette, IN 47996-2200
Ph. (765) 497-6100

Griffin Corp.
Rocky Ford Rd., P.O. Box 1847
Valdosta, GA 31603-1847
Ph. (912) 242-8635
(800) 237-1854

Gustafson, Inc.
1400 Preston Rd., Suite 400
Plano, TX 75093
Ph. (972) 985-8877

Helena Chemical Co.
6075 Poplar Ave. Suite 500
Memphis, TN 38119
Ph. (901) 761-0050
(214) 937-4182

International Sulphur, Inc.
P.O. Box 611
Mt. Pleasant, TX 75456-0611
Ph. (903) 577-5500
(800) 828-7857

JMS Flower Farms, Inc.
1105 25th Ave.
Vero Beach, FL 32960
Ph. (561) 567-9241

Kemira Biotech
(Ag Bio Development, Inc.)
9915 Raleigh St.
Westminster, CO 80030
Ph. (303) 469-9221

Kincaid Enterprises, Inc.
P.O. Box 549
Nitro, WV 25143
Ph. (800) 951-3377

Loveland Industries
P.O. Box 1289
Greeley, CO 80632-1289
Ph. (970) 356-8920

Micro Flo Co.
P.O. Box 5948
Lakeland, FL 33807-5948
Ph. (941) 647-3608
(800) 451-8461

Mycogen Crop Protection
5501 Oberlin Drive
San Diego, CA 92121
Ph. (619) 453-8030
(800) 745-7476

Novartis Crop Protection
P.O. Box 18300
Greensboro, NC 27419-8300
Ph. (800) 888-8372

(800) 334-9481

Platte Chemical Co.
P.O. Box 667
419 18th St.
Greeley, CO 80632-0667
Ph. (970) 356-4400

Rhône-Poulenc Ag. Co.
P.O. Box 12014
2 T.W. Alexander Drive
Research Triangle Park, NC 27709
Ph. (919) 549-2000
(800) 334-9745

Riverside (see Terra)

Rohm & Haas Co.
100 Independence Mall West
Philadelphia, PA 19106-2399
Ph. (215) 592-3000

Stoller Enterprises, Inc.
8580 Katy Freeway, Suite 200
Houston, TX 77024
Ph. (713) 461-1493

Sun Company, Inc.
P.O. Box 1135
Marcus Hook, PA 19061
Ph. (800) 395-2786

SureCo
310 Hwy 341 South
Fort Valley, GA 31030
Ph. (800) 984-8333
(912) 825-3351

Terra Industries Inc.
600 Fourth St.
P.O. Box 6000
Sioux City, IA 51102-6000
Ph. (712) 277-1340

UAP (United Agri-Products; see Loveland and Platte)

UCB Chemicals Corp.
2000 Lake Park Dr.
Smyrna, GA 30080
Ph. (770) 801-3202
(800) 426-3820

Uniroyal Chemical Co.
Benson Road
Middlebury, CT 06749
Ph. (203) 573-2000

Wilbur-Ellis
P. O. Box 1020
Edinburg, TX 78540
Ph. (956) 383-8433

Zeneca Ag Products
P.O. Box 15458
1800 Concord Pike
Wilmington, DE 19850-5458
Ph. (800) 759-4500
(800) 327-8633

APPROXIMATE RATES FOR MIXING 1 GALLON OF SPRAY SOLUTION

Wettable/Powders (rate/100 gal specified on label)

<u>Product</u>	0.25 lb	0.5 lb	1.0 lb	1.5 lb	2.0 lb
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Benlate 50%	0.25 Tbsp	0.5 Tbsp	1 Tbsp	1.5 Tbsp	2 Tbsp
Dithane M-45 80% WP	0.25 Tbsp	0.5 Tbsp	1 Tbsp	1.5 Tbsp	2 Tbsp
Kocide 101 77% WP	0.25 Tbsp	0.5 Tbsp	1 Tbsp	1.5 Tbsp	2 Tbsp
Terraclor 75% WP	0.37 tsp	0.75 tsp	1.5 tsp	2.25 tsp	3 tsp

Liquid or Flowable (rate/100 gal)

<u>Product</u>	4 oz	8 oz	1.0 pt	1.5 pt	2.0 pt
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Bravo 720 54% F	0.25 tsp	0.5 tsp	1 tsp	1.5 tsp	2 tsp
ChampFormula 2 37.5% F	0.25 tsp	0.5 tsp	1 tsp	1.5 tsp	2 tsp

EMERGENCY ASSISTANCE

In case of pesticide emergencies where information is needed regarding treatment of overexposure and intoxication, methods of decontamination, or chemical spill, please call:

CHEMTREC TOLL-FREE

800-424-9300

POISONING HOTLINE FOR TEXAS --- STATEWIDE

800 - POISON - 1

(800-764-7661)

Or, contact the telephone operator.

INDEX OF ACTIVE INGREDIENTS

<u>Active ingredient</u>	<u>Trade name</u>	<u>Company</u>	<u>*Chemical class</u>	<u>Page(s)</u>
aldicarb	Temik 15G CP, Temik 15G Lock'n Load	Rhône-Poulenc	CAR	27,51
<i>Ampelomyces quisqualis</i>	#AQ 10	Ecogen	BIO	5-7,9,13,16,18,21-23, 25,44,53,55
azoxystrobin	Quadris	Zeneca	methoxyacrylate	18,46,53
<i>Bacillus subtilis</i>	#Kodiak Concentrate Biological Fungicide	Gustafson	BIO	10,25,29
benomyl	Benlate F, Benlate SP	Du Pont	CAR	5,8,13,14,17,18,28,30, 37,50,54
captan	Captan 30-DD, Captan 400	Gustafson	carboximide	3,10,13,18,28,43,50,52
	Captan 7.5 Dust, Captan 5% Potato Seed Treater	Platte		46
	Captan 10 D, Captan D, Captan 75 Slurry, Captan 75 WDG, Captan 75 D, Captan 4000, Nubark Captan, Nubark Captan 10	Wilbur-Ellis		2,3,5,10,13,18,22,28, 39,42,43,46,50
captan + diazinon + lindane	Kernel Guard	Riverside/Terra	carboximide + OP + CH	10,28
captan + lindane	Seed Mate Isotex Seed Treater F	Loveland Industries	carboximide + CH	4,13,18,28,38,39,50
captan + PCNB + thiabendazole	Rival Flowable	Gustafson	carboximide + CH + benzimidazole	29
carboxin + diazinon + lindane	KickStart	Helena	carboxide + OP + CH	10,28
carboxin + thiram	Vitaflo-280, Vitavax-CT	Gustafson, Helena	carboxide + CAR	10,29

Active ingredient	Trade name	Company	*Chemical class	Page(s)
chlorine dioxide	Anthium AGP	International Dioxide	oxidizing agent	49
chloroneb	Demosan 65W, Demosan F	Kincaid	chlorophenyl	28
	Nu-Flow D	Wilbur-Ellis		28
chloropicrin	Chlor-O-Pic	Great Lakes	trichloronitro-methane	24
chlorothalonil	Agronil 500, Agronil 720	Helena	nitrile	5,8,11,14,19,29,40,47, 54
	Terranil 90DF, Terranil 90DF WSP, Terranil 6L, Terranil Zn	Riverside/Terra		5,8,11,14,19,29,30,40, 47,53,54
	Exotherm Termil	Sureco		55
	Bravo Ultrex, Bravo 720, Bravo Weather Stik, Bravo 500, Bravo Zn	Zeneca		5,8,11,14,19,29,30,40, 47,54
chlorothalonil + copper	Terranil Cu	Riverside/Terra	nitrile + fixed copper	5,8,19,47,54
copper	#Champion WP, Champ F, Champ Formula 2 F	Agtrol	fixed copper	3,5,6,8,9,14,15,20,23, 25,30,31,34,36,41,43, 48,50,51,55
	Basic Copper Sulfate, KOP-300 Flowable Copper F, KOP- Hydroxide, KOP- Hydroxide 50 WS	Drexel		3,5,6,8,9,14,15,20,23, 30,31,34,41,43,48,50, 51,54,55

Active ingredient	Trade name	Company	*Chemical class	Page(s)
	Basicop WP, Kocide LF, Kocide 4.5LF, #Kocide 101 WP, #Kocide DF, #Kocide 2000, Blue Viking Copper Sulfate Instant, Tennessee Brand Copper Sulfate Instant	Griffin		3,5,6,8,9,14,15,19-21, 23-25,30,31,36,41,43, 44,48,50,51,54-56
	3 Lb Copper F	Helena		3,6,9,15,20,23,31,34, 36,41,43,48,51,55
	Microperse COC, 53WP, Basic Copper 53, Nu-Cop 50DF, Nu-Cop 50WP, Nu-Cop 3L	Micro Flo		3,5,6,8,14,15,20,21,23, 24,30,31,34,36,41,43, 44,48,50,51,54-56
	#C-O-C-S WDG	Platte		3,5,14,20,23,25,30,34, 41,43,48,50,54
	Top Cop Tri-Basic	Stoller		3,6,9,15,20,23,30,41, 43,48,51,55
copper + zinc	Kocide 20/20	Griffin	fixed copper + zinc	8,19,30,43,48,54
	Copper-Z 4/4 F	Helena		8,9
cymoxanil	Curzate 60 DF	DuPont	acetimide	47
dichloro-propene	Telone II	Dow AgroSciences	CH	35
dichloro-propene + chloropicrin	Telone C-17, Telone C-35	Dow AgroSciences	CH + trichloro-nitromethane	24,35
dicloran	Botran 75-W, Botran 75-WSB, Botran 5F	Gowan	aniline	8,21,30,33,35,37,40, 52,55
	Botran 6% D	Wilbur-Ellis		33,35,39,55

Active ingredient	Trade name	Company	*Chemical class	Page(s)
ethoprop	Mocap EC, Mocap 10% G, Mocap 10% G Lock'n Load	Rhône-Poulenc	OP	10,12,17,27,45,51
fatty acids (potassium salt)	#M-Pede	Mycogen	fatty acid	3-6,13,16,18,21-23,29,32,33,35-37,39,42-44,46,49,53,55
fenamiphos	Nemacur 15% G, Nemacur 3 E	Bayer	OP	12,22
fludioxonil	Maxim 4FS, Maxim XL, Maxim Potato Seed Protectant	Novartis	phenylpyrrole	3-5,7,10,13,18,28,33,36,45,52
	Nubark Maxim Potato Seed Piece Tretament	Wilbur-Ellis		45
fludioxonil + mancozeb	Maxim MZ Potato Seed Protectant	Novartis	phenylpyrrole + CAR	46
fosetyl-aluminum	Aliette WDG, Aliette WSP	Rhône-Poulenc	OP	3,4,8,14,18,34,36,40,51,54
fosetyl-aluminum + maneb	Aliette/Maneb 2+2	Rhône-Poulenc	OP + CAR	14,18,34,40,54
iprodione	Rovral, Rovral 4 F, Rovral WG, Rovral WSP	Rhône-Poulenc	carboxamide	5,14,30,34,36,38-40,48
mancozeb, maneb	Penncozeb 80 WP, Penncozeb 75DF, Maneb 80WP, Maneb 75DF	Elf Atochem	CAR	1,7,10,13,18,19,22,23,29,34,39,40,43,46,47,53,55
	Manzate 80WP, Manzate 75DF, Manex II F, Manex F With Zinc	Griffin		1,7,10,11,14,19,23,29,34,39,40,43,46,47,53,55

Active ingredient	Trade name	Company	*Chemical class	Page(s)
	Potato Seed Treater 6%	Platte		46
	Dithane DF Dithane F-45, Dithane ST, Dithane M-45, Dithane WSP	Rohm and Haas		1,7,10,11,19,39,40,46, 47,53
	Nubark Mancozeb	Wilbur-Ellis		46
mancozeb + dimethomorph	Acrobat MZ	American Cyanamid	CAR + cinnamic acid derivative	47
mancozeb + copper	ManKocide	Griffin	CAR + fixed copper	19,40,48,53
maneb + streptomycin	Seed Treatment For Potatoes LD	Helena	CAR + antibiotic	46
maneb + triphenyltin hydroxide	Pro-tex	Griffin	CAR + organic tin	48
mefenoxam	Ultra Flourish	Agtrol	acylalanine	2,7,13,17,22,33,36,42, 50,52
	Ridomil Gold EC, Ridomil Gold GR, Apron XL LS	Novartis		1-4,7,13,17,22,27,28, 33,36-38,42,50-52
mefenoxam + chlorothalonil	Ridomil Gold Bravo WP, Ridomil Gold Bravo Twin-Pak	Novartis	acylalanine + nitrile	5,14,18,40,47,54
mefenoxam + copper	Ridomil Gold Copper	Novartis	acylalanine + fixed copper	5,14,18,40,43,48,50,54
mefenoxam + mancozeb	Ridomil Gold MZ	Novartis	acylalanine + CAR	18,40,47,53
metalaxyl	Allegiance-FL	Gustafson	acylalanine	3,4,7,10,18,28,37,50
	Apron F, Apron TL	Wilbur-Ellis		3,7,10,28,38
metam-sodium	Vapam, Vapam HL	Amvac	CAR	12,13,24,35,36
	Nemasol 42%, Nemasol Soil Fumigant	Platte		24

Active ingredient	Trade name	Company	*Chemical class	Page(s)
	Soil-Prep 42, Soil-Prep III, Soil Prep IV	Wilbur-Ellis		12,24,36,45
methyl bromide	Meth-O-Gas Q	Great Lakes	alkyl bromide	26
methyl bromide + chloropicrin	Brom-O-Gas, Brom-O-Gas 2, Terr-O-Gas 98, Terr-O-Gas 75, Terr-O-Gas 67	Great Lakes	alkyl bromide + trichloronitromethane	24,25
	MBC 98-2, MBC 80-20, MBC 75-25, MBC 67-33	Riverside/Terra		24,25
myclobutanil	Nova 40W	Rohm and Haas	triazole	19
<i>Myrothecium verrucaria</i>	#DiTera ES	Abbott	BIO	13
orthophenylphenol	Cucumber & Pepper Luster 223 F	Elf-Atochem	phenol	22,45
oxamyl	Vydate L	Du Pont	CAR	4,7,8,17,18,22,38,39,42,43,45,46,51,53
paraffinic oil	JMS Stylet-Oil	JMS Flower Farms	petroleum oil	2,4,9,16,21,23-26,32,34,35,37,38,44,49,55,56
	Sunspray Ultra-Fine	Sun Co Inc		21,26
PCNB	PCNB 75WSP, PCNB 75WP, PCNB 2-E Liquid EC, PCNB 2 LF, PCNB 10% G	Amvac	CH	13,28,39,42,45,52
	RTU-PCNB	Gustafson		28
	Terraclor 10% G, Terraclor 2 Lb E, Terraclor 400, Terraclor 75WP, Terraclor F, Turfcide	Uniroyal		13,16,28,32,38,39,42,44,52,56
	PCNB 2 Spray, PCNB 2-E	Wilbur-Ellis		28,39

Active ingredient	Trade name	Company	*Chemical class	Page(s)
PCNB + mefenoxam	Ridomil Gold PC	Novartis	CH + acylalanine	27
PCNB + metalaxyl + <i>Bacillus subtilis</i>	System 3	Helena	CH + acylalanine + BIO	28
potassium bicarbonate	Armicarb 100 F, Armicarb 100 WSP	Church and Dwight	salt	16,21,32,34,44,49,52, 55
propamocarb + chlorothalonil	Tattoo C	AgrEvo	CAR + nitrile	47
propiconazole	Tilt, Tilt SI	Novartis	triazole	8,11
sodium hydroxide	#Fruit & VegetableKleen 440	Elf-Atochem	base	26
sodium hypochlorite	Clorox	Clorox Company	acid	1,26,42,46,52
	Dixichlor	DPC Industries		26,49
	Agclor 310	Elf-Atochem		26
<i>Streptomyces griseoviridis</i> strain k61	#Mycostop Biological Fungicide	Kemira Agro Oy	BIO	25,26
streptomycin sulfate	Agricultural Streptomycin	Gustafson	antibiotic	29
	Agri-mycin 17 WP	Novartis		44,46,55
sulfur	Micro Sulf	Agtrol	sulfur	6,16,21,32,34,36,49,55
	Kumulus DF	BASF		2,4,6,16,21,31,36,41, 44,49
	Suffa, Sulfur 90W	Drexel		2,4,6,15,16,21,23,31, 32,36,41,42,44,49,51
	Microthiol Special W	Elf Atochem		6,16,21,32,34,41,44, 49,45
	90% Sulfur D, Liquid Sulfur Six, W Sulfur	Helena		2,15,16,21,31,32,44,49

Active ingredient	Trade name	Company	*Chemical class	Page(s)
	Commercial D Sulphur, Superfine W Sulphur, EM-53 L Sulphur	International Sulphur		1,3,4,6,15,16,31,32,41,42,44,48,49
	Sulfur 6L, Dual Spraying and D Sulfur, Microspense WS	Micro Flo		2,4,6,15,16,21,23,31,32,34,41,42,49
	Sulfur 6L	Riverside/Terra		2,4,6,16,21,32,36,42,44,49,51,55
	D Sulfur, Sulfur F 6, Thiolux DF Micronized Sulfur	Platte		2,4,6,15,16,21,23,31,32,34,36,41,42,44,49,51,55
	That F Sulfur	Stoller		6,21,32,37,38,44,49
	D Sulfur, Spray Sulfur, Golden-Dew, Ben-Sul Spray, Special Electric, Signal D Sulfur, Ben-Sul 85, Ben-Sul 60 D, Sulfur DF	Wilbur-Ellis		1-4,6,9,15,16,20,21,23,31,32,34,36,41,44,48,49,51,55
sulfur + chlorothalonil	Bravo S	Helena	sulfur + nitrile	14,30,47,54
	Terranil S	Riverside/Terra		14,30,47
sulfur + copper	Top Cop With Sulfur F	Stoller	sulfur + fixed copper	1,3,6,9,15,20,23,31,34,41,44,48,50,51
terbufos	Counter CR, Counter CR Lock 'N Load, Counter 15G	American Cyanamid	OP	10
thiabendazole	Mertect 340-F WDS, Nubark TBZ	Novartis, Wilbur-Ellis	benzimidazole	6,37,46,49,52
	Decco Salt No. 19	Elf-Atochem		6,49
thiophanate-methyl	Topsin M WSB, Topsin M 70W	Elf Atochem	CAR	18,30,39
	Tops 5, Tops-2.5D	Gustafson, Platte		46

Active ingredient	Trade name	Company	*Chemical class	Page(s)
thiophanate-methyl + mancozeb	Tops MZ	Gustafson	CAR + CAR	46
thiram	Thiram 50WP Dyed, 42-S Thiram		CAR	3,5,10,11,13,18,22,25, 29,33,38,43,50,53
<i>Trichoderma harzianum</i> Rifai strain KRL-AG2	Bio-Trek 22G, Bio-Trek Nursery Drench	Wilbur Ellis	BIO	16,22,56
	#T-22 Planter Box Biological Fungicide, #RootShield G, #RootShield Drench	BioWorks	BIO	25,26
trifloxystrobin	Flint	Novartis	strobilurin	18
triphenyltin hydroxide	Super Tin 80 WP	Griffin	organic tin	48
vinclozolin	Ronilan DF, Ronilan EG	BASF	analide	34,39
ziram	Ziram 76DF, Ziram Granuflo	Elf Atochem, UCB Chemicals	CAR	53

* Abbreviations used for chemical classes:

BIO = biological product; contains living microorganisms or their byproducts

CAR = carbamate

OP = organophosphate

CH = chlorinated hydrocarbon

Materials allowed or regulated for use in the production, processing and handling of organic food and fiber according to Texas Department of Agriculture, Austin, Texas, and The Organic Materials Review Institute, Eugene, Ore.

INDEX OF VEGETABLES AND HERBS

All vegetables and herbs (general)	24	Crucifers	12	scallion, seed, shallot)	38
Amaranth	35	Cucumber	17	Orach	35
Artichoke (Chinese, globe, Jerusalem)	35	Cucurbits	17	Pak-choi	12
Arugula	12	Cushaw	17	Parsley (curly leaf, flat leaf)	7
Asparagus	1	Dandelion	33	Parsnip	7
Balsam pear (balsam apple, bitter melon, Chinese cucumber)	17	Dill	7	Pea (crowder, field, garden, snow, southern, succulent, sugar)	27
Bean (bush, green, French, pole, runner, snap, string)	27	Dock	35	Pepper	42
Bean (dry, field, kidney, navy, pinto)	27	Eggplant	22	Peppergrass	12
Bean [baby and large lima, broad, fava (faba), garbanzo, mung]	27	Endive (broad leaved)	33	Peppermint	35
Beet	2	Escarole	33	Persian melon	17
Bok choy	12	Eschalot (green)	38	Popcorn	9
Brassica crops	12	Fava (faba) bean	27	Potato	45
Broccoli (flowering, cavalo, Chinese, raab)	12	Fennel (Florence)	7	Pumpkin (calabaza, cushaw)	17
Brussels sprouts	12	Flowering broccoli	12	Purslane (garden, winter)	35
Cabbage	12	Garbanzo bean	27	Raab broccoli	12
Chinese loosehead	12	Garden cress	12	Radicchio	33
Chinese tight-heading	12	Garlic	38	Radish	12
mustard	12	Gay lon	12	Rape greens	12
Calabaza	17	General (all vegetables and herbs)	24	Rhubarb	35
Cantaloupe	17	Gherkin	17	Rocket salad	12
Cardoon	33	Ginger	35	Roquette	12
Carrot	4	Ginseng	35	Rutabaga	12
Casaba melon	17	Globe artichoke	35	Salsify	33
Cassava	35	Gourd, edible	17	Scallion	38
Catjang cowpea	27	Greens (mustard, collards, turnip, rape)	12	Snow pea	27
Cauliflower	12	Herbs	7, 12, 24, 33, 35, 38	Southern pea (blackeyed, cowpea, crowder)	27
Cavalo broccoli	12	Honey balls	17	Soybean (edible)	27
Celeriac	7	Honeydew melon	17	Spearmint	35
Celery	7	Horseradish	12	Spinach	50
Celtuce	33	Jerusalem artichoke	35	Spinach (New Zealand, tanier, vine)	35
Chard, Swiss	2	Kale	12	Spinach mustard	12
Chervil	7	Kohlrabi	12	Squash (Chinese)	17
Chickpea	27	Leek	38	Squash (acorn, buttercup, spaghetti, winter)	17
Chicory	33	Legumes	27	Squash (crookneck, straightneck, summer, zucchini)	17
Chinese artichoke	35	Lentil	27	Sweet corn	9
Chinese broccoli	12	Lettuce (celery, head, leaf)	33	Sweetpotato	51
Chinese cucumber	17	Mango melon	17	Swiss chard	2
Chinese loosehead cabbage	12	Melon (Chinese preserving, honey balls, muskmelon, Persian, winter, casaba, honeydew, crenshaw)	17	Tanier spinach	35
Chinese mustard	12	Melon (bitter, Chinese preserving, citron)	17	Tomato	52
Chinese tight-heading cabbage	12	Melon (casaba, crenshaw, garden, honeydew, mango, winter)	17	Turnip (roots, greens)	12
Chinese waxgourd	17	Mint (peppermint, spearmint)	35	Upland cress	12
Chive	38	Miscellaneous plants	35	Vine spinach	35
Chrysanthemum (edible-leaved)	33	Mung bean	27	Watercress	12
Citron melon	17	Mushroom	37	Watermelon	17
Cole crops	12	Muskmelon	17	Waxgourd	17
Collards	12	Mustard (cabbage, Chinese, greens, spinach)	12	Welsh onion (bunching, spring)	38
Corn (popcorn, sweet, sweet seed production)	9	Mustard cabbage	12	Yam	35
Corn salad	35	New Zealand spinach	35	Zucchini squash	17
Crenshaw melon	17	Okra	37		
Cress (garden, upland, watercress)	12	Onion	38		
		Onion (bunching, dry bulb, green,			

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