

TDOC
Z TA245.7
B873
NO.1140B

Texas Agricultural Extension Service

The Texas A&M University System

B-1140B

TEXAS PLANT DISEASES

Handbook

TEXAS STATE DEPOSITORY

LIBRARY
TEXAS A&M UNIVERSITY

OCT 08 1997

TEXAS STATE
DOCUMENTS

Chemical Control Supplement for Vegetables

1995 Revised Edition



[Blank Page in Original Bulletin]

TEXAS PLANT DISEASES HANDBOOK--
CHEMICAL CONTROL SUPPLEMENT FOR VEGETABLES

**TEXAS PLANT DISEASES HANDBOOK--
CHEMICAL CONTROL SUPPLEMENT FOR VEGETABLES**

Edited by
Mark C. Black, Extension Plant Pathologist, Uvalde

with assistance from

Jerral D. Johnson, Assoc. Dept. Head for Extension
Larry W. Barnes - College Station
Thomas Isakeit - Weslaco
Janell Stevens Johnk - Dallas
Harold W. Kaufman - Lubbock
Joseph P. Krausz - College Station
Thomas A. Lee, Jr. - Stephenville
George L. Philley - Overton

Extension Plant Pathologists
Department of Plant Pathology and Microbiology

(Revised December 1995)

The editor acknowledges the significant contributions made to
this publication by Camilo G. Cortez, III and J. Darlene Mills

[Blank Page in Original Bulletin]

TEXAS PLANT DISEASES HANDBOOK--
CHEMICAL CONTROL SUPPLEMENT FOR VEGETABLES

TABLE OF CONTENTS

Preface	i
Disease Control Strategies and Vegetable Health Protection Chemicals	ii
Explanation of Terms Describing Chemical Use	iii
Abbreviations for Units of Measure and Time	v
How to Use This Bulletin	vi
Pesticides Labeled for Vegetable Disease Control in Texas	1
All Vegetables	1
Asparagus	3
Beet and Swiss Chard	4
Carrot	6
Celery and Celeriac	8
Cole Crops (Brassicas) [bok choy, broccoli, brussels sprouts, cabbage, Chinese cabbage, cauliflower, collards, mustard, kale, kohlrabi, radish, turnip, etc.]	10
Corn [sweet corn, popcorn, sweet corn seed production]	14
Cucurbit Crops [cantaloupe, cucumber, honeydew, muskmelon, pumpkin, squash, watermelon, etc.]	17
Eggplant	22
Garlic	24

Herbs [Jerusalem artichoke, basil, chives, cilantro, dill, fennel, ginger, ginseng, horseradish, peppermint, spearmint, oregano, parsley, watercress, etc.]	26
Legume Vegetables [bean, lima bean, lentil, garbanzo bean, lupine, mung bean, southern pea, edible soybean, etc.]	28
Lettuce [endive, escarole]	34
Mushroom	36
Okra	37
Onion [eschalot, shallot, leek, scallion, etc.]	37
Pepper	41
Potato	45
Spinach	50
Sweetpotato	52
Tomato	53
Approximate Equivalent Rates of Fungicides for Mixing 1 Gallon of Spray Solution	58
Manufacturers and Distributers of Disease Control Products for Commercial Vegetables in Texas	59
Emergency Assistance Telephone Numbers	60
Index of Vegetable Crops	61

PREFACE

This publication was prepared to serve as a reference in vegetable disease control for County Agricultural Extension Agents in Texas. It is also available to growers, consultants, agribusiness personnel and others who have need of information on pesticides labeled for vegetable disease control.

Listings contained in this publication were selected on the basis of their having been registered with the Environmental Protection Agency as well as being available for purchase by Texas producers. This policy may have resulted in inadvertent omission of materials which were equally suitable in performance to those listed. Companies with such products are invited to submit labels and performance data to the editor. Such submissions will be evaluated and considered for addition to the next revision.

Products listed in this publication have been carefully checked with product labels. Users should be reminded, however, that registrations and EPA policies change regularly. It is imperative that vegetable health protection products be used in strict accordance with the label shown on the container or packaging at the time of use. New products regularly enter the market and some existing products are withdrawn or labels are changed. All use suggestions were current as of 1 December 1995 to the knowledge of the editor.

Information on the current status of chemical clearances can be obtained by contacting Dr. Rodney Holloway, Pesticide Impact Assessment Specialist, Agricultural and Environment Safety Group, at Texas A&M University, College Station 77843 (409-845-3849). Information can also be obtained from the appropriate manufacturer (see the list of addresses and telephone numbers in the back of this bulletin), the Texas Department of Agriculture (Pesticide Product Registration, Austin, 512-463-7422 or 463-7407) or directly from the Environmental Protection Agency (Pesticide Branch, Region 6, Dallas 214-665-7240). While complete revision is done periodically, it is not possible to issue revisions to those who may be in possession of copies of this publication.

This publication represents a list of labeled products and is not intended to substitute in any way for the recommendations appearing on the label. Before using any vegetable health protection product, read and follow label directions.

The contents of this publication are listed for informational purposes only and the mention of products does not guarantee or warrant the standard of products mentioned, nor does it imply approval of any product to the exclusion of others which may be equally suitable.

DISEASE CONTROL STRATEGIES AND VEGETABLE HEALTH PROTECTION CHEMICALS

Plant health protection chemicals are potentially very important in the production of healthy and profitable vegetable crops. Certain factors should be considered in order to achieve desired goals. First, it is necessary to correctly identify the present or potential disease problems so that effective and appropriate cultural and chemical control alternatives can be selected. For assistance with plant disease identification, contact your local County Extension Agents-Agriculture and -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 (409-845-8032).

Seldom does application of plant health protection chemicals result in complete control of a given disease. If selected and used properly, however, these compounds may permit a crop to be grown economically without substantial loss. Plant health protection chemicals are always more effective when used in conjunction with appropriate cultural practices. It is not realistic to expect chemical compounds alone to control disease causing organisms. Practices such as crop rotation, ideal planting date, site selection, soil preparation, crop residue management, irrigation, and use of resistant varieties to reduce pathogen populations should be standard procedure and any chemicals will then work more effectively. For additional information on alternation control methods, consult the Texas Plant Diseases Handbook on the internet at <http://cygnus.tamu.edu/Textlab/tpdh.html>, and reference publications on vegetable diseases.

Most vegetable disease problems are more easily managed with preventative measures than with rescue treatments. This means that cultural disease control techniques must be used and that plant health protection chemicals may need to be applied just prior to the time that disease development is expected. An understanding of disease development is required to ensure proper time of treatment. Application intervals for protectant fungicides are specified on product labels. Assistance in the form of computer internet sites, publications, personal consultation and educational meetings are available from the Texas Agricultural Extension Service. See your County Extension Agents-Agriculture and -IPM.

Limitations exist as to when materials should be applied in relation to harvest (pre-harvest interval, PHI). A few compounds have no time limitation and can be used at any time up to harvest. Others have waiting periods and should not be used within certain periods immediately before harvest. A limited amount of information of this type is presented in this publication, but the label should be consulted for full details.

Reentry time is the length of time after application of a chemical before individuals 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. Some labels specify longer reentry times and other labels specify shorter times if appropriate Worker Protection Standards (WPS) specified on the label are followed. Applicators should check labels for reentry times before applying a treatment.

Rates are those that are approved by the Environmental Protection Agency. These rates have been found to be both effective and economical from research and demonstration experience. Rates that are less or greater than that shown on the label should not be used. If too little is used, one may not get desired results and if too much is used, harm may come to the target plants, the consumer, or the environment.

Positive benefits can come from the proper use of vegetable health compounds. Crop protection that integrates all available disease control techniques is an essential aspect of producing a healthful and economical food supply.

EXPLANATION OF TERMS DESCRIBING CHEMICAL USE

Interval This is the interval between applications. Generally shorter intervals are used during periods of weather that favor disease development or on highly susceptible crop varieties. Longer intervals are suggested during periods of low humidity or on varieties that have a high level of disease resistance.

Rate Normally a range of rates are given for a product. Lower rates are generally used during periods of low humidity or on varieties that have a high degree of disease resistance. The higher rate is used on crops that are susceptible to the pathogen or during periods of weather conditions that favor disease development. The higher rates are sometimes used if the pathogen has become established on a crop.

See label	This term is used to indicate that before using any product, read the label(s) carefully for detailed directions and any changes that might have taken place after this publication was printed. There will also be additional information about the product, any restrictions, and safety.
Formulation	To assist in the use of this publication, as many of the different formulations of a product as possible were included. If a formulation was inadvertently left out, it does not mean that the product is not effective. When using different formulations of a product be sure to read each label carefully for any differences.
max.	Maximum allowed amount
"a.i."	Active ingredient. Sometimes used to clearly state a pesticide amount when several formulations are available with different percent inert ingredients.
"E", "EC"	Emulsifiable concentrate - A formulation which contains an active ingredient, a solvent, and an emulsifier.
"WP", "W"	Wettable powder - Dry powder formulation which easily mixes with water. Wettable powders contain an active ingredient, an emulsifier and a diluent.
"D"	Dust, Dusting - Dusts are ready to use when purchased. Dusts contain an active ingredient and diluent.
"SP", "S"	Soluble Powder - Dry powders which contain an active ingredient and a diluent. No emulsifier is required since the active ingredient is water soluble.
"WDG", "WG", "DF", "DG"	Wettable Dry Granules, Wettable Granules, Dry Flowable and Dry Granules - Dry formulations that are formulated in small distinct particles. They contain an active ingredient, an emulsifier and a diluent.
"F", "FL"	Flowables - Liquid formulations that are suspensions of the active ingredient in a diluent.

"WDS"

Water Dispensable Suspension

"G"

Granules, Granular - Granules are applied directly to the soil and incorporated. They contain an active ingredient and a diluent. The diluent is coarse or granulated and may be clay, ground corn cob or similar material. The active ingredient is absorbed or coats the granule.

"LC"

Liquid Concentrate - A liquid material that contains an active ingredient and a diluent.

"L"

Liquid - Similar to LC, except the material is not concentrated.

ABBREVIATIONS FOR UNITS OF MEASURE AND TIME

A	acre(s)
ft	foot or feet
gal	gallon(s)
lb	pound(s)
oz	ounce(s)
pt	pint(s)
qt	quart(s)
sq	square (as in "sq ft")
Tbsp	tablespoon
tsp	teaspoon
ppm	parts per million
min	minute
hr	hour
d	day
wk	week

HOW TO USE THIS BULLETIN

Disease ^A	Ingredient Formulation ^A	Rate ^A	Remarks ^{A,B}
----------------------	-------------------------------------	-------------------	------------------------

BEET [table/garden¹, beet greens², Swiss chard³]

See footnotes on odd numbered pages

A. Field Soil Treatment (see also ALL VEGETABLES, pages 1-2)

Phytophthora and Pythium

metalaxyl	Ridomil 50W ¹ 50%	
	Ciba	

2-4 lb/
treated A

WARNING, 1^D, see label

Company

Labeled only for a specific vegetable in the BEET group

Different rates for two products with the same active ingredient concentration

C. Field Foliar Treatments

Anthracnose^T, bacterial ice nucleation^U, black rot (Xanthomonas)^V, Cercospora leaf spot^W, downy mildew^X, leaf blight and spots [black, Alternaria, angular]^Y, powdery mildew^Z

copper (metallic equivalent)

Basic Copper 53, Microsporse C.O.C. 53 WP 53 ^{1,X,Y}	
Micro Flo	

3, 2-4 lb/A

WARNING, DANGER, 0^C, 7-10 d interval, see labels

Kocide 101 ^{1,U,Y} , C-O-C-S WDG ^{1,X,Y} 50%	
Griffin, Platte	

2-5 lb/A

DANGER, CAUTION, 0^C, see label

Kocide DF ^{1,2,U,W} 40%	
Griffin	

2-5 lb +
spray oil/A

DANGER, 0^C, 10 14, see label

Different product for certain problems on a specific vegetable

Products with different concentrations of the same or similar ingredient

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

PESTICIDES LABELED IN TEXAS FOR VEGETABLE DISEASE CONTROL

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
ALL VEGETABLES				
A. Field Soil Treatments				
Plant parasitic nematodes ^Y , soilborne plant pathogenic fungi ^Z	metam-sodium (sodium N-methyldithiocarbamate)	Metam 426, Busan 1236, Soil-Prep 42 42% ^{Y,Z} Amvac, Buckman, Wilbur-Ellis	see labels	DANGER , see labels
		Vapam, Metam Sodium, Metam, Nemasol, Busan 1020, Soil-Prep 33% ^{Y,Z} Zeneca, Amvac, Platte, Buckman, Wilbur-Ellis	see labels	DANGER, WARNING , see labels
	methyl bromide + chloropicrin (98%+2%)	Brom-O-Gas 2, Terr-O-Gas 98, MBC 98-2 100% ^{Y,Z} Great Lakes, Riverside/Terra	see labels	DANGER ; for transplant production of all vegetables; for soil treatment for growing only the food crops of asparagus, broccoli, cauliflower, eggplant, lettuce, melon (except watermelon), dry bulb onion, pepper, tomato; see labels
	(80%+20%)	MBC 80-20 ^{Y,Z} 100% Riverside/Terra	see label	same as above
	(75%+25%)	MBC 75-25 ^{Y,Z} 100% Riverside/Terra	1 lb/100 sq ft	same as above
	(67%+33%)	Terr-O-Gas 67, MBC 67-33 100% ^{Y,Z} Great Lakes, Riverside/Terra	see labels	same as above
	dichloropropene + chloropicrin (77.9%+16.5%)	Telone C-17 ^Y 94.4% DowElanco	see label	DANGER , see label
	dichloropropene	Telone II ^Y 94% DowElanco	see label	WARNING , see label

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
ALL VEGETABLES, continued				
Damping off, root rots	<i>Streptomyces griseoviridis</i> strain K61	Mycostop Biofungicide 30% Kemira Agro Oy	see label	CAUTION , 14-42 d interval, soil spray or drench, see label
B. Seed Treatments				
Early root rot, seed or soil-borne damping off	<i>Streptomyces griseoviridis</i> strain K61	Mycostop Biofungicide 30% Kemira Agro Oy	see label	CAUTION , for cole crops, herbs, leek, legume vegetables, lettuce, onion, root crops, spinach, tomatoes; not for melon ; see label
C. Field Foliar Treatments				
<i>Botrytis</i> gray mold	<i>Streptomyces griseoviridis</i> strain K61	Mycostop Biofungicide 30% Kemira Agro Oy	0.18 oz/13 gal	CAUTION , 0 ^c , see label
D. Greenhouse and Cold Frame Treatments				
Plant parasitic nematodes, soilborne plant pathogenic fungi	metam-sodium (sodium N-methylthio-carbamate)	Metam 426, Busan 1236 42% Amvac, Buckman	30-75, 14-72 gal/A	DANGER , see labels
		Metam Sodium, Busan 1020 33% Amvac, Buckman	40-100, 20-100 gal/A	DANGER , see labels
	methyl bromide + chloropicrin (98%+2%)	Brom-O-Gas 2, Terr-O-Gas 98, MBC 98-2 100% Great Lakes, Riverside/Terra	see labels	DANGER , transplant production only, see labels
		MBC 80-20 100% Riverside/Terra	see label	DANGER , transplant production only, see label
	(80%+20%)	MBC 75-25 100% Riverside/Terra	see label	DANGER , transplant production only, see label
	(75%+25%)	Terr-O-Gas 67, MBC 67-33 100% Great Lakes, Riverside/Terra	see labels	DANGER , transplant production only, see labels
(67%+33%)				
Damping off	copper (metallic equivalent)	C-O-C-S WDG 50% Platte	4 lb/100 gal, 2 oz/3 gal	CAUTION , not for cabbage or related seedlings, begin at emergence, see label

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
ALL VEGETABLES, continued				
Botrytis gray mold, root rot, seed rot, stem rot, wilt	<i>Streptomyces griseoviridis</i> strain K61	Mycostop Biofungicide 30% Kemira Agro Oy	see label	CAUTION ; soil treatment or foliar spray; transplants and container grown vegetables (tray, pot, bag, rockwool, raised bench, bed with physical barrier to root growth); see label

ASPARAGUS

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Crown rot and spear rot (<i>Phytophthora</i>)	metalaxyl	Ridomil 50W 50% Ciba	2 lb/10 gal /A	WARNING , 1 ^c ; 2 ^d ; 29-59 d interval for cutting beds; or after planting seedlings or covering crowns; see label
		Ridomil 2E 25.1% Ciba	2 qt/10 gal /A	WARNING , same as above

B. Crown Treatments (planting stock)

Crown rot	dithiocarbamate (mancozeb, maneb)	Dithane M-45, Mancozeb 80WP 80% ^y Rohm and Haas, Platte	1 lb/100 gal	CAUTION , 5 min crown dip, see label
		Manzate 200 DF, Dithane DF 75% Du Pont, Rohm and Haas	1 lb/100 gal, dip 5 min	CAUTION , 5 min crown dip, see labels
		Dithane F-45 37% Rohm and Haas	0.8 qt/100 gal	CAUTION , 5 min crown dip, see label

C. Field Foliar Treatments

Cercospora leaf spot ^y , rust ^z	dithiocarbamate (mancozeb, maneb)	Penncozeb, Mancozeb 80WP, Dithane M-45 80% ^{y,z} Elf Atochem, Riverside/Terra, Platte, Rohm and Haas	2 lb/A	CAUTION , 180 ^c , 8 lb ^d , 10 d interval, on ferns after harvest, see labels
		Penncozeb DF, Manzate 200 DF, Dithane DF 75% ^{y,z} Elf Atochem, Du Pont, Rohm and Haas	2 lb/A	CAUTION , 180 ^c , 8.5 or 8 lb ^d , 10 d interval, on ferns after harvest, see labels

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{x,y,z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
ASPARAGUS, continued				
		Dithane F-45 ^{Y,Z} 37% <i>Rohm and Haas</i>	1.6 qt/A	CAUTION, 180 ^C , 6.4 qt ^D , 10 d interval, see label
	sulfur	Commercial D Sul- phur ^Z 99.1% <i>Inter- national Sulphur</i>	10-30 lb/A	CAUTION, 180 ^C , 7-10 d interval, see label
		Superfine W Sulphur ^Z 94% <i>International Sulphur</i>	6-16 lb/A	CAUTION, 180 ^C , 7-14 d interval, see label
		90% Sulfur D ^Z 90% <i>Setre</i>	15-20 lb/A	CAUTION, 180 ^C , see label
		Thiolux DF Micronized ^Z 80% <i>Sandoz, Platte</i>	10-30 lb/A	CAUTION, 0 ^C , 7- 10 d interval, see labels
	sulfur ele- mental + cop- per metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^Z 58.5% <i>Stoller</i>	2 qt/A	CAUTION, 0 ^C , 10 d interval, see labels

BEET [table/garden¹, beet greens², Swiss chard³]

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

<i>Phytophthora</i> and <i>Pythium</i>	metalaxyl	Ridomil 50W ¹ 50% <i>Ciba</i>	2-4 lb/ treated A	WARNING, 1 ^D , see label
		Ridomil 2E ¹ 25.1% <i>Ciba</i>	4-8 pt/ treated A	WARNING, 1 ^D , see label

B. Seed Treatments (see also ALL VEGETABLES, page 2)

Pythium damping off	metalaxyl	Apron 50W ¹ 50% <i>Ciba</i> , <i>Gustafson</i>	1 oz/100 lb	CAUTION, WAR- NING, see labels
		Apron F ¹ 28.35% <i>Wilbur-Ellis</i>	1.5 oz/100 lb	CAUTION, see label
		Apron 25W ¹ 25% <i>Ciba</i>	2 oz/100 lb	CAUTION, see label
	oxadixyl	Anchor F ¹ 29.5% <i>Gustafson</i>	1.5 oz/100 lb	CAUTION, see label
Damping off ^W , seedling blight/ disease ^X , seed rot/decay ^Y , seed storage loss ^Z	captan	Captan 75 Slurry or 75 D 75% ^{1,3,W,Y} <i>Wilbur-Ellis</i>	8, 12 oz/ 100 lb	DANGER, see labels
		Captan 75 ^{1,3,W,Y} 73.3% <i>Gustafson</i>	5.5 ³ , 8 ¹ oz/100 lb	DANGER, see label
		Captan Sprills ^{1,3,W,Y} 62.9% <i>Wilbur-Ellis</i>	9.25 oz/100 lb	DANGER, see label
		Captan 4000 ^{1,3,W-Z} 39.6% <i>Wilbur-Ellis</i>	8-12 ¹ , 10- 12 ³ oz/100 lb	DANGER, see label

BEET, continued

		Captan 400 or 400-D ^{1,3,W-Z} 38.25% Gustafson	8-12 ¹ , 10- 12 ³ oz/100 lb	DANGER , see labels
		Captan 300 ^{1,3,W-Z} 29.35% Gustafson	9.5 oz/100 lb	DANGER , see label
	thiram	Thiram 50WP Dyed ^{1,3,} W-Y 50% Gustafson	8 oz/100 lb	CAUTION , see label
		42-S Thiram ^{1,3,W-Y} 42% Gustafson	8 oz/100 lb	CAUTION , see label

C. Field Foliar Treatments

Anthracnose ^T , bac- terial ice nuclea- tion ^U , black rot (<i>Xanthomonas</i>) ^V , Cercospora leaf spot ^W , downy mildew ^X , leaf blight and spots [black, <i>Alter- naria</i> , angular] ^Y , powdery mildew ^Z	copper (metallic equivalent)	Basic Copper 53, Microspense C.O.C. 53 WP 53% ^{1,X,Y} <i>Micro Flo</i>	3, 2-4 lb/A	WARNING, DANGER , 0 ^C , 7-10 d interval, see labels
		Kocide 101 ^{1,U,Y} , C-O- C-S WDG ^{1,X,Y} 50% <i>Griffin, Platte</i>	2-5 lb/A	DANGER, CAUTION , 0 ^C , see label
		Kocide DF ^{1,2,U,W} 40% <i>Griffin</i>	2-5 lb + spray oil/A	DANGER , 0 ^C , 10- 14, see label
		Cuproxat F ^{1,T,X,Y} 15% <i>Micro Flo</i>	2.67-6.67 pt/A	CAUTION , 0 ^C , 7- 10 d interval, see label
	sulfur	Commercial D Sul- phur ^{1,Z} 99.1% <i>Inter- national Sulphur</i>	5-15 lb/A	CAUTION , 0 ^C , 10- 30 d interval, see label
		Superfine W Sulphur ^{1,Z} 94% <i>In- ternational Sulphur</i>	5-10 lb/100 gal/A	CAUTION , 0 ^C , see label
		Microspense W Sulfur ^{1,Z} 90% <i>Micro Flo</i>	4 lb/A	CAUTION , 0 ^C , 18 d interval, see label
		Thiolux DF Micronized ^{1,Z} 80% <i>Sandoz, Platte</i>	3-5 lb/A	CAUTION , 0 ^C , 10- 30 d interval, see labels
		EM-53 L Sulphur ^{1,Z} 53% <i>International Sulphur</i>	8-16 pt/A	CAUTION , 0 ^C , 10- 30 d interval, see label
		Sulfur 6L or F 6 52% ^{1,Z} <i>Micro Flo, Riverside/Terra, Platte</i>	see labels	CAUTION , 0 ^C , see labels
	sulfur ele- mental + cop- per metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{1,X,Z} 58.4% <i>Stoller</i>	2 qt/A	CAUTION , 0 ^C , 7- 14 d interval, see labels

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

CARROT

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Root knot (except Javanese), lesion, sting, spiral, and stunt nematodes	oxamyl	Vydate L 24% <i>Du Pont</i>	2-4 (broadcast) or 12 (in-furrow) gal/20 gal/A	DANGER, 4 gal ^D , see label
<i>Phytophthora</i> and <i>Pythium</i>	metalaxyl	Ridomil 50W 50% <i>Ciba</i>	2-4 lb/treated A	WARNING, 1 ^D , see label
		Ridomil 2E 25.1% <i>Ciba</i>	4-8 pt/treated A	WARNING, 1 ^D , see label

B. Seed Treatments (see also ALL VEGETABLES, page 2)

Pythium damping off	oxadixyl	Anchor F 29.5% <i>Gustafson</i>	1.5 oz/100 lb	CAUTION, see label
	metalaxyl	Apron 50W 50% <i>Gustafson</i>	0.5-1 oz/100 lb	WARNING, see label
Damping off ^W , seedling blight/disease ^X , seed rot/decay ^Y , seed storage loss ^Z	captan	Captan 75 D or 75 Slurry 75% ^{W,Y} <i>Wilbur-Ellis</i>	9, 6 oz/100 lb	DANGER, see labels
		Captan Sprills ^{W,Y} 62.9% <i>Wilbur-Ellis</i>	7 oz/100 lb	DANGER, see label
	lindane + captan (25%+12.5%)	Isotox Seed Treater-F or Treater (F) 37.5% ^X <i>Wilbur-Ellis, Loveland</i>	4 oz/100 lb	DANGER, hopper box, see label
	thiram	Thiram 50WP Dyed ^{W-Y} 50% <i>Gustafson</i>	8 oz/100 lb	CAUTION, see label
		42-S Thiram ^{W-Y} 42% <i>Gustafson</i>	8 oz/100 lb	CAUTION, see label

C. Field Foliar Treatments

Cavity spot, foliar disease (Oomycete fungi)	metalaxyl + copper metallic equivalent (10%+39.1%)	Ridomil/Copper 70WP 70% <i>Ciba</i>	2 lb/A	DANGER, 7 ^C , 4 ^D , 14 d interval, see label
White mold (<i>Sclerotinia</i>)	benomyl	Benlate 50% WP <i>Du Pont</i>	4-16 oz/5 gal/A (air)	CAUTION, 3 lb ^D , 4 ^C , 7-10 d interval, see label
Powdery mildew	sulfur	Commercial D Sulphur 99.1% <i>International Sulphur</i>	10-30 lb/A	CAUTION, 0 ^C , see label
		Superfine W Sulphur 94% <i>International Sulphur</i>	5-10 lb/100 gal/A	CAUTION, 0 ^C , see label
		Dual Spraying and D Sulfur 90% <i>Micro Flo</i>	10 lb/A	CAUTION, 14 d interval, see label

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
CARROT, continued				
		Microthiol Special W, Thiolum DF Micronized 80% <i>Elf</i> Atochem, Sandoz, Platte	3-10 lb/A	CAUTION , 0 ^c , see labels
		EM-53 L Sulphur 53% International Sulphur	2-12 pt/A	CAUTION , 0 ^c , see label
		Sulfur 6L or F 6 52% <i>Micro Flo</i> , Riverside/Terra, Platte	13 pt/A	CAUTION , 0 ^c , 14 d interval, see labels
Alternaria leaf/late blight ^v , bacterial ice nucleation ^w , black crown rot (<i>Alternaria radicina</i>) ^x , Cercospora leaf spot (carrot/early blight) ^y , downy mildew ^z	sulfur elemental + copper metallic equivalent (50%+4.4%) copper (metallic equivalent)	Top Cop With Sulfur ^{v,y,z} 58.4% Stoller Basic Copper 53 ^{v,y,z} , Microspense C.O.C. 53 WP ^{v,w,y,z} 53% <i>Micro Flo</i>	2 qt/A 3-4, 2-4 lb/A	CAUTION , 0 ^c , 7-10 d interval, see labels WARNING , 0 ^c , 7-10 d interval, see labels
		Kocide 101 ^y , Blue Shield WP ^{w,y} or DF ^{w,y} , Champion WP ^{w,y} , C-O-C-S WDG ^{v,y} 50% Griffin, <i>Micro Flo</i> , Agtrol, Platte	2 lb, 2-4 lb/A	DANGER, CAUTION , 0 ^c , see labels
		Kocide DF ^y 40% Griffin	2 lb/A	DANGER , 0 ^c , 7-14 d interval, see label
		Kocide 606 ^{w,y} , Blue Shield 3L ^y , Champ Formula 2 F ^{w,y} , 3 Lb Copper F ^y 24.4% Griffin, <i>Micro Flo</i> , Agtrol, Setre	see labels	DANGER, CAUTION , 0 ^c , 7-14 d interval, see labels
		Kocide LF ^y , Cuproxat F ^{v,y} , Champ F ^{w,y} 15% Griffin, <i>Micro Flo</i> , Agtrol	2.67 pt/A	CAUTION , 0 ^c , 7-14 d interval, see label
	chlorothaloni	Terranil 90DF ^{v,y} or 90DF WSP 90% Riverside/Terra	1.3-1.5, 1.25-1.5 lb/A	DANGER , 7-10 d interval, see labels
		Bravo Ultrex ^{v,y} 82.5% ISK Biosciences	1.4-1.8 lb/A	DANGER , 0 ^c , 7-10 d interval, see label
		Bravo W-75 ^{v,y} 75% ISK Biosciences	1.5-2 lb/A	DANGER , 0 ^c , 7-10 d interval, see label

Rate and Formulation may differ for a specific **Disease** as shown by a superscript code from the end of the alphabet (^{x,y,z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
CARROT, continued				
		Terranil 6L, Bravo 720, Bravo Weather Stik, Agronil 720 54% ^{V,Y} Riverside/Terra, ISK Biosciences, Setre	1.5-2 pt/A	WARNING , 0 ^C , 7-10 d interval, see labels
		Bravo 500, Chlorothalonil 4L, Evade F 40.4% ^{V,Y} ISK Biosciences, Riverside/Terra, Platte	see labels	WARNING , 0 ^C , 7-10 d interval, see labels
	iprodione	Rovral W ^{V,X} 50% Rhône-Roulenc	1-2 lb/10 gal/A	CAUTION , 0 ^C , 4 ^D , 7-14 d interval, see label
		Rovral 4 F ^{V,X} 41.6% Rhône-Roulenc	1-2 pt/10 gal/A	CAUTION , 0 ^C , 4 ^D , 7-14 d interval, see label
D. Postharvest Treatments				
Gray mold (<i>Botrytis cinerea</i>), Sclerotinia rot (<i>Sclerotinia sclerotiorum</i>)	thiabendazole	Mertect 340-F WDS, 42.28% Merck	42 oz/100 gal, dip for 5-10 sec	CAUTION , treat before storage, see label

CELERY [celeriac¹, celery²]

A. Field Soil Treatments (see ALL VEGETABLES, pages 1-2)

B. Seed Treatments

Pythium damping off	oxadixyl	Anchor F ¹ 29.5% Gustafson	1.5 oz/100 lb	CAUTION , see label
---------------------	----------	---------------------------------------	---------------	----------------------------

C. Field Foliar Treatments

Bacterial blight ^S , bacterial ice nucleation ^T , basal stalk rot (<i>Rhizoctonia solani</i>) ^U , downy mildew ^V , early blight (<i>Cercospora</i>) ^W , late blight (<i>Septoria</i>) ^X , leaf spot ^Y , pink rot (<i>Sclerotinia sclerotiorum</i>) ^Z	benomyl	Benlate 50% WP ^{2,W,X} Du Pont	4-8 oz/5 gal/A (air)	CAUTION , 7 ^C , 3 lb ^D , 7-10 d interval, see label
	thiophanate-methyl	Topsin M 85WDG ^{2,W,X} 85% Elf Atochem	10 oz/A	CAUTION , 7 ^C , 4 ^D , 7-14 d interval, see label
		Topsin M 70W or WSB 70% ^{2,W,X} Elf Atochem	0.5 lb/A	CAUTION , 7 ^C , 4 ^D , 7-14 d interval, see label
		Topsin M 4.5F ^{2,W,X} 46.2% Elf Atochem	0.4 lb/A	CAUTION , 7 ^C , 4 ^D , 7-14 d interval, see label

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
CELERY, continued				
	dicloran	Botran 75W ^{2,Z} 75% Gowan	2 lb/100 gal (500 gal/A max.) and repeat; or 5.33 lb/100 gal/A	CAUTION , 7 ^C or 28 ^C (single application), 7-14 d interval, see label
	propiconazole	Tilt ^{2,W,X} 41.8% Ciba	4 oz/A	WARNING , 14 ^C , 4 ^D , 7 d inter-val, see label
	chlorothaloni-	Terranil 90DF or 90DF WSP 90% ^{2,U,W,X,Z} Riverside/Terra	see labels	DANGER , see labels
	nil	Bravo Ultrex ^{2,U,W,X,Z} 82.5% ISK Biosciences	see label	DANGER , 7 ^C , 3-7 d interval, see label
		Bravo W-75 ^{2,U,W,X,Z} 75% ISK Biosciences	1-3 lb/A	DANGER , 7 ^C , 3-7 d interval, see label
		Terranil 6L, Bravo 720 or Weather Stik or 54%, Agronil 720 54% ^{2,U,W,X,Z} River-side/Terra, ISK Biosciences, Setre	see labels	WARNING , 7 ^C , 3-7 d interval, see labels
		Bravo 500, Chlorothalonil 4L, Evade F 40.4% ^{2,U,W,X,Z} ISK Biosciences, River-side/Terra, Platte	see labels	WARNING , 7 ^C , 3-7 d interval, see labels
	copper (metallic equivalent)	Basic Copper 53 ^{1,S,W,X} , Microsperse C.O.C. 53 WP ^{1,S,T,W,X} 53% Micro Flo	3-4, 3-6 lb/A	WARNING, DANGER , 0 ^C , see labels
		Kocide 101 WP ^{1,2,S,W,X} , Blue Shield WP ^{2,S,T,W,X} or DF ^{2,S,T,W,X} , Champion WP ^{1,2,S,T,W,X} , C-O-C-S WDG ^{2,V,W,X} 50% Griffin, Micro Flo, Agtrol, Platte	see labels	DANGER, CAUTION , 0 ^C , see labels
		Kocide DF ^{2,S,W,X} 40% Griffin	2 lb/A	DANGER , 0 ^C , 5-7 d interval, see label
		Kocide 606 ^{2,S,W,X} , Blue Shield 3L ^{1,2,S,W,X} , Champ Formula 2 F ^{1,2,S,T,W,X} , 3 Lb Copper F ^{1,2,S,W,X} 24.4% Griffin, Micro Flo, Agtrol, Setre	see labels	DANGER, CAUTION , 0 ^C , 5-7 d interval, see labels

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
CELERY, continued		Kocide LF ^{2,S,W,X} , Cuproxat F ^{2,S,W,X} , Champ F ^{1,2,S,W,X} 15% Griffin, Micro Flo, Agtrol	2.67 pt/A	CAUTION, 0 ^C , 5-7 d interval, see label
	copper + zinc (metallic equivalents 4%+4%)	Copper-Z 4/4 F ^{2,S,W,X} 8% Setre, Helena	31-72 oz/A	DANGER, 0 ^C , 7 d interval, see label
	sulfur ele- mental + cop- per metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{2,S,W,X,Y} 58.4% Stoller	2 qt/A	CAUTION, 0 ^C , 7- 10 d interval, see label

COLE CROPS (BRASSICAS) [bok choy¹, broccoli² (Chinese/gai lon/white flowering/flowering³, Raab⁴), brussels sprouts⁵, cabbage⁶ (Chinese loosehead⁷, Chinese tight-heading⁸, Napa⁹), cauliflower¹⁰, collards¹¹, mustard (Chinese¹², greens¹³), kale¹⁴, kohlrabi¹⁵, radish¹⁶, rape/canola greens¹⁷, rutabaga¹⁸, turnip¹⁹]

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Plant parasitic nematodes ^Y , soil- borne plant patho- genic fungi (in- cluding <i>Plasmodi- ophora brassicae</i> [club root of crucifers] ^Z	fenamiphos	Nemacur 15% G ^{5,6,8,Y} Bayer	7.3-18.4 oz/1000 ft	DANGER, 1 ^D , see label
	ethoprop	Mocap EC ^{6,Y} 69.6% Rhône-Roulenc	2.9 oz/1000 row ft or 3.33 qt/A (broadcast)	DANGER, see label
		Mocap 10% G ^{6,Y} Rhône-Roulenc	1.4 lb/1000 row ft or 50 lb/A (broadcast)	WARNING, see label
metam-sodium	Metam 426, Busan 1236 42% ^{1-19,Y,Z} Amvac, Buckman	see labels	WARNING, DANGER, 1 ^D , see labels	
	Vapam, Metam Sodium, Busan 1020 EC 33% ^{1-19,Y,Z} Zeneca, Buckman	see labels	WARNING, DANGER, 1 ^D , see labels	
Basal stem rot (<i>Phytophthora</i>) ^Y , damping off (<i>Pythium</i>) ^Z	metalaxyl	Ridomil 50W 50% Ciba	0.5-1 ^{2,3,6,8,} 10, ^Z or 2-4 2,3,6,8,10, ^{Y,Z} or 2-4 ^{16,18, 19,Y,Z} lb/ treated A	WARNING, 1 ^D , see label
		Ridomil 2E 25.1% Ciba	1-2 ^{2,3,6,8,} 10, ^Z or 4-8 2,3,6,8,10, ^{Y,Z} or 4-8 ^{16,18, 19,Y,Z} pt/ treated A	WARNING, 1 ^D , see label

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
COLE CROPS (BRASSICAS), continued				
Clubroot ^Y , wirestem (black root, Corticium [Rhizoctonia] solani) ^Z	quintozene (PCNB)	PCNB 75WP ^{2,5,6,10,Y,Z} ,	see labels	CAUTION , 30 lb a.i. ^D , see labels
		PCNB 75DG ^{2,5,6,10,Z} ;		
		Terraclor ^{2,3,5,6,8,10,Y,Z} 75%		
		Amvac, Uniroyal		
		Terraclor F ^{2,3,5,6,8,10,Y,Z} 40% Uniroyal	7.5 ^Y gal/30 gal, 2.8-3.8 ^Z gal/50 gal/A	CAUTION , 30 lb a.i. ^D , see label
		PCNB 10% G ^{(2,5,6,Y)(10,Y,Z)} , Terraclor 10% G ^{2,3,5,6,8,10,Y,Z} Amvac, Platte, Uniroyal	see labels	CAUTION , 30 lb a.i. ^D , see labels

B. Seed Treatments (see also ALL VEGETABLES, page 2)

Damping off ^V , damping off (Pythium) ^W , seedling blight/disease ^X , seed rot/decay ^Y , seed storage loss ^Z	oxadixyl	Anchor F ^{2,5,6,10,11,13-19,W} 29.5% Gustafson	1.5 oz/100 lb	CAUTION , see label
	captan	Captan 75 Slurry or 75 D 75% ^{2,5,6,10,16,18,19,V,Y} Wilbur-Ellis	see labels	DANGER , see labels
		Captan 75 ^{2,5,6,10,16,19,V,Y} 73.3% Gustafson	1 ^{6,16} , 2 ¹⁹ , 4 ^{2,5,10} oz/100 lb	DANGER , see label
		Captan Sprills ^{2,5,6,10,16,18,19,V,Y} 62.9% Wilbur-Ellis	see label	DANGER , see label
		Captan 4000 ^{2,5,6,10,13,16,17,19,V,X-Z} 39.6% Wilbur-Ellis	see label	DANGER , see label
		Captan 400 or 400-D ^{2,5,6,10,12,13,16,17,19,V,X-Z} 38.25% Gustafson	1-2 ^{2,5,6,10,12,13,16,17,19} oz/100 lb	DANGER , see labels
		Captan 300 ^{2,5,6,10-14,16,17,19,V,X-Z} 29.35% Gustafson	1.25 ^{2,5,6,10-14,16,17,19} oz/100 lb	DANGER , see label
	thiram	Thiram 50 WP Dyed ^{2,5,6,10-16,19,V,X,Y} 50% Gustafson	8 oz/100 lb	CAUTION , see label
		42-S Thiram ^{2,5,6,10-16,19,V,X,Y} 42% Gustafson	8 oz/100 lb	CAUTION , see label
	lindane + captan (25%+12.5%)	Isotox Seed Treater-F or Treater (F) ^{2,5,6,10,16,V,X-Z} 37.5% Wilbur-Ellis, Loveland	2 oz/100 lb	DANGER , see labels

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease^A Ingredient Formulation^A Rate^A Remarks^{A,B}

COLE CROPS (BRASSICAS), continued

Seedborne blackleg (Phoma) benomyl Benlate WP 50%^{2,5,6-8,10,11,13-15,17-19} Du 8 oz/0.5-3 pt/100 lb CAUTION, 1^D, see label

Pont

C. Field Foliar Treatments

Alternaria leaf spot^X, downy mildew^Y, powdery mildew^Z metalaxyl + chlorothalonil (9%+72%) Ridomil/Bravo 81WP^{2,3,6,8,10,X,Y} 81% Ciba 1.5-2 lb/A DANGER, 7^C, 4^D, 14 d interval, see label

sulfur + chlorothalonil (27%+19%) Bravo S F^{2,5,6,10,X-Z} 46% ISK Biosciences, Setre, Helena 4.5^{X,Y}, 5.5^Z pt/A CAUTION, 0^C, 7-10^{X,Y} or 21^Z d interval, see label

chlorothalonil Terranil 90DF^{2,5,6,10,Y,Z} or 90DF WSP 90% Riverside/Terra 1.3, 1.25 lb/A DANGER, 7-10 d interval, see labels

Bravo Ultrex^{2,3,5,6,8,2,10,X,Y} 82.5% ISK Biosciences 1.4 lb/A DANGER, 7^C, 7-10 d interval, see label

Bravo W-75^{2,5,6,10,Y} 75% ISK Biosciences 1.5 lb/A DANGER, 7-10 d interval, see label

Terranil 6L^{2,3,5,6,8,10,X,Y}; Bravo 720 or Weather Stik^{2,3,5,6,8,10,Y,Z}; Agronil 720^{2,3,5,6,8,10,Y,Z} 54% Riverside/Terra, ISK Biosciences, Setre 1.5 pt/A WARNING, see labels

Bravo 500 40.4%^{2,3,5,6,8,10,X,Y}, Chlorothalonil 4L^{2,5,6,10,Y,Z}, Evade F^{2,5,6,10,Y,Z} 40.4% ISK Biosciences, Riverside/Terra, Platte see labels WARNING, 7^C, 7-10 d interval, see labels

dithiocarbamate (mancozeb, maneb) Maneb 80^{2,5,6,8,10,14,15,Y,Z} 80% Elf Atochem 1.5-2 lb/A CAUTION, 7^{2,5,6,8,10,15,C}, 10^{14,C}, 7-10 d interval, see label

Maneb 75DF^{2,5-8,10,14,15,Y,Z} 75% Elf Atochem 1.5-2^{2,5,6,8,10,14,15}, 1-1.5⁷ lb/A CAUTION, 7^{2,5,6,8,10,15,C}, 10^{7,14,C}, 7-10 d interval, see label

Manex F With Zinc^{2,5-8,10,14,15,X,Y} 37% Griffin see labels CAUTION, see labels

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
COLE CROPS (BRASSICAS), continued				
Anthracnose ^T , Cercospora/ Cercospora leafspot ^U , gray mold (<i>Botrytis</i>) ^V , powdery mildew (<i>Erysiphe</i>) ^W , ring spot ^X , rust ^Y , white mold (<i>Sclerotinia</i>) ^Z	benomyl	Benlate WP 50% ^{5,7,8,19,T-X,Z} Du Pont	8 ^{(7,8,Z)(19,T,U,V)} , 32 ^{5,T,V,X,Z} oz/A	CAUTION , 7 ^{5,7,8,C} , 14 ^{20,C} ; 3 ^{5,20,D} , 6 ^{7,8,D} ; 7 ⁵ , 7-10 ^{7,8} or 14 ²⁰ d interval, see label
	sulfur	Commercial D Sulphur ^{2,5,6,10,18,19,W} 99.1% International Sulphur	10-25 lb/A	CAUTION , 0 ^C , 7-10 d interval, see label
		D Sulfur ^{18,19,W} 98% Platte	15-20 lb/A	CAUTION , 0 ^C , 7-14 d interval, see label
		Superfine W Sulphur ^{2,5,6,10,18,19,W} 94% International Sulphur	6-16 lb/A	CAUTION , 0 ^C , 7-14 d interval, see label
		Microspurse W Sulfur ^{2,5,6,10,11,13,14,18,19,W} , Dual Spraying and D Sulfur ^{2,5,6,10,11,13,14,18,19,W} , W Sulfur ^{2,5,6,10,11,14,W} 90% Micro Flo, Setre	3-5, 5 lb/A	CAUTION , 0 ^C , 10-14 or 14 d interval, see label
		D Sulfur ^{18,19,W} 84% Platte	15-20 lb/A	CAUTION , 0 ^C , see label
		Microthiol Special ² , 5,6,10,11,14,18,19,W; Thiolux DF Micronized ^{2,5,6,10,11,14,18,19,W,Y} 80% Elf Atochem; Sandoz, Platte	see labels	CAUTION , 0 ^C , see labels
		EM-53 L Sulphur ^{2,5,6,10,W} 53% International Sulphur	2-7 pt/A	CAUTION , 0 ^C , see label
		Sulfur 6L ^{2,5,6,10,11,13,14,18,19,W} or F 6 ² , 5,6,10,11,13,14,18,19,W; L Sulfur Six F ^{1-19,W} 52% Micro Flo, Riverside/Terra, Platte, Setre, Helena	3-7, 3-4 pt/A	CAUTION , 0 ^C , 10-14 or 21 d interval, see labels

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
COLE CROPS (BRASSICAS), continued				
Bacterial ice nucleation ^W , black leaf spot (<i>Alternaria</i>) ^X , black rot (<i>Xanthomonas</i>) ^Y , downy mildew ^Z	sulfur elemental + copper metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{2,5-7,10,11,13-16,19} , X-Z 58.4% <i>Stoller</i>	2 qt/A	CAUTION , 0 ^C , 7-10, see labels
	copper (metallic equivalent)	Basic Copper 53 ^{2,5,6,10,X,Z} 53% <i>Micro Flo</i>	1-3 lb/A	WARNING , 0 ^C , 7-10 d interval, see labels
		Kocide 101 WP ^{2,5,6,10,11,W-Z} ; Blue Shield DF ^(2,5,10,11,W,Z) (6,W-Z) or WP ^(2,5,6,10,W,Z) (6,W-Y); Champion WP ^(2,5,10,W,Z) (6,W-Z), C-O-C-S WDG ^{2,5,6,10,Y,Z} 50% <i>Griffin, Micro Flo, Agtrol, Platte</i>	see labels	DANGER, CAUTION , 0 ^C , see labels
		Kocide DF ^{2,5,6,10,11,13,19,W-Z} 40% <i>Griffin</i>	1-2 lb/A	DANGER , 7-10 d interval, see label
		Kocide 606 ^(2,5,10,11,W,Z) (6,W,X-Z), Champ Formula 2 F ^(2,5,10,W,Z) (6,W-Z) 24.4% <i>Griffin, Agtrol</i>	see labels	DANGER, CAUTION , 0 ^C , 7-10 d interval, see labels
		Kocide LF ^(2,5,10,11,X,Y) (6,X-Z), Cuproxat F ^(2,5,10,Z) (6,X-Z), Champ F ^(2,5,10,Z) (6,W-Z) 15% <i>Griffin, Micro Flo, Agtrol</i>	see labels	CAUTION , 0 ^C , see labels
	fosetyl-aluminum	Aliette WDG ^{1-3,5,6,9-15,17,Z} 80% <i>Rhône-Roulenc</i>	2-3 (tank mixed), 3-5 lb/15 gal/A	CAUTION , 3 ^C , 7 ^D , 7-21 d interval, see labels
Foliar disease (Oomycete fungi), white rust	metalaxyl + copper metallic equivalent (10%+39.1%)	Ridomil/Copper 70WP WS ¹⁶ 70% <i>Ciba</i>	2 lb/A	DANGER , 7 ^C , 4 ^D , 14 d interval, see label
Black leg (<i>Phoma lingam</i>)	iprodione	Rovral W ² 50% <i>Rhône-Roulenc</i>	2 lb/40 gal/A	CAUTION , 0 ^C , 2 ^D , see label
		Rovral 4 F ² 41.6% <i>Rhône-Roulenc</i>	2 pt/40 gal/A	CAUTION , 0 ^C , 2 ^D , see label

CORN [sweet¹, popcorn², sweet corn seed production³]

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Plant parasitic nematodes	ethoprop	Mocap EC ¹ 69.6% <i>Rhône-Roulenc</i>	2.4-3.3 oz/ 1000 row ft, 1 gal/A (broadcast)	DANGER , see label
---------------------------	----------	---	---	---------------------------

CORN, continued

		Mocap 10% G ¹ <i>Rhône-Roulenc</i>	1.13-1.5 lb /1000 row ft, 60 lb/ A broadcast	WARNING , see label
Plant parasitic nematodes (lance, lesion, root knot, spiral, stunt, sting, stubby root, dagger)	terbufos	Counter CR ^{1,2} 20% <i>American Cyanamid</i>	6 oz/1000 ft of row banded or in-furrow	DANGER , at planting, 6.5 lb ^D
		Counter 15G ^{1,2} 15% <i>American Cyanamid</i>	8 oz/1000 ft of row banded or in-furrow	DANGER , at planting, 8.7 lb ^D

B. Seed Treatments

Pythium damping off ^Y , systemic downy mildew ^Z	metalaxyl	Apron 50W ^{1,2,Y,Z} 50% <i>Ciba, Gustafson</i>	0.5-1 ^{1,2,Y} or 2 ^{1,Z} oz/100 lb	CAUTION , WARNING , see label
		Apron F ^{(1,2,Y)(1,Z)} 28.35% <i>Wilbur-Ellis</i>	0.55-1.5 oz/100 lb	CAUTION , see label
		Apron 25W ^{1,2,Y,Z} 25% <i>Ciba</i>	1-2 ^{1,2,Y} , 4 ^{1,Z} oz/100 lb	CAUTION , see label
	oxadixyl	Anchor F ^{2,3,Y} 29.5% <i>Gustafson</i>	0.75-1.5 oz/100 lb	CAUTION , see label
Damping off ^W , seedling blight/disease ^X , seed rot/decay ^Y , seed storage loss ^Z	captan	Captan 75 Slurry or 75 D 75% ^{1,W,Y} <i>Wilbur-Ellis</i>	see labels	DANGER , see labels
		Captan 75 ^{1,W,Y} 73.3% <i>Gustafson</i>	2.67 oz/100 lb	DANGER , see label
		Captan Sprills ^{1,W,Y} 62.9% <i>Wilbur-Ellis</i>	3 oz/100 lb	DANGER , see label
		Captan 4000 ^{1,W-Z} 39.6% <i>Wilbur-Ellis</i>	2-4 oz/100 lb	DANGER , see label
		Captan 400 or 400-D 38.25% ^{1,W-Z} <i>Gustafson</i>	2-4 oz/100 lb	DANGER , see labels
		Captan 300 ^{1,W-Z} 29.35% <i>Gustafson</i>	3.25 oz/100 lb	DANGER , see label
	thiram	Thiram 50 WP ^{1,W-Y} Dyed 50% <i>Gustafson</i>	3 oz/100 lb	CAUTION , see label
		42-S Thiram ^{1,W-Y} 42% <i>Gustafson</i>	5 oz/100 lb	CAUTION , see label
	carboxin + thiram (14.9%+13.2%)	Vitaflo-280 ^{1,W,Y} 28.1% <i>Gustafson</i>	4.5 oz/100 lb	CAUTION , see label

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
CORN, continued				
Root disease (<i>Fusarium</i> , <i>Pythium</i>)	<i>Bacillus subtilis</i> GB03	Kodiak Concentrate Biological Fungicide ¹ 2.75% Gustafson	0.1-0.5 oz/ 100 lb	CAUTION , also for reformula- tion, see label
	<i>Bacillus subtilis</i> MBI 600	Epic Biological Fungicide ¹ 2.75% Gustafson	0.25-1 oz/100 lb	CAUTION , see label

C. Field Foliar Treatments

Common rust ^Y , Helminthosporium leaf blight ^Z	dithiocarbamate (mancozeb, maneb)	Maneb 80 WP, Penncozeb; Dithane M-45, Mancozeb 80WP 80% ^{1-3,Y,Z} <i>Elf Atochem; Rohm and Haas, Platte</i>	see labels	CAUTION , 7 ^C , 7.5 lb ^D , see labels
		Maneb 75 DF, Penncozeb DF; Dithane DF, Manzate 200 DF 75% ^{1-3,Y,Z} <i>Elf Atochem; Rohm and Haas, Du Pont</i>	see labels	CAUTION , 7 ^C , see labels
		Manex F With Zinc, Dithane F-45 37% ^{1-3, Y,Z} <i>Griffin, Rohm and Haas</i>	1.2 qt/A	CAUTION , 7 ^C , 3- 10 or 4-7 d interval, see labels
	chlorothaloni- nil	Terranil 90DF or 90DF WSP 90% ^{1,3,Y,Z} <i>Riverside/Terra</i>	0.65-1.6, 1.25-1.5 lb/A	DANGER , 14 ^C , 4-7 d interval, not for processing, see labels
		Bravo Ultrex ^{1,3,Y,Z} 82.5% <i>ISK Biosciences</i>	0.7-1.8 lb/A	DANGER , 14 ^C , 4-7 d interval, see label
		Bravo W-75 ^{1,Z} 75% <i>ISK Biosciences</i>	1.5-2 lb/A	DANGER , 14 ^C , 4-7 d interval, not for processing, see label
		Terranil 6L, Bravo 720 or Weather Stik, Agronil 720 54% ^{1,3,Y,Z} <i>River- side/Terra, ISK Biosciences, Setre</i>	0.75-2 pt/A	WARNING , 14 ^C , 4- 7 d interval, not for processing, see labels
		Bravo 500, Chloro- thalonil 4L, Evade F 40.4% ^{1,3,Y,Z} <i>ISK Biosciences, River- side/Terra, Platte</i>	see labels	WARNING , 14 ^C , 4- 7 d interval, not for processing, see labels
Eye spot ^W , gray leaf spot ^X , Helminthosporium leaf blight ^Y , rust ^Z ,	propiconazole	Tilt 41.8% <i>Ciba</i>	2-4 ^Y , 4 ^{W,X,Z} oz/A	WARNING , 14 ^{1,C} , 30 ^{2,3,C} , not after silking ^{3,C} ; 16 oz ^D ; 7-14 ^{Y,Z} or 14 ^{W,X} d interval; see label

CUCURBIT CROPS [balsam pear/bitter melon¹, cantaloupe², casaba³, Chinese waxgourd/ Chinese preserving melon⁴, citron melon⁵, crenshaw⁶, cucumber⁷, cucurbit hybrid⁸, gherkin⁹, gourd (edible)¹⁰, honey balls¹¹, honeydew melon¹², mango melon¹³, melon¹⁴, muskmelon¹⁵, Persian melon¹⁶, pumpkin¹⁷, squash¹⁸ (summer/chayote fruit¹⁹, winter²⁰) watermelon²¹]

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Plant parasitic nematodes	ethoprop	Mocap EC ⁷ 69.6%	6.8 oz/1000 row ft	DANGER , see label
		<i>Rhône-Roulenc</i>		
		Mocap 10% G ⁷	3.2 lb/1000 row ft	WARNING , see label
		<i>Rhône-Roulenc</i>		
Root knot (except Javanese), lesion, ring, sting, and stunt nematodes	oxamyl	Vydate L ^{2,7, 12,14,17,18,21} 24%	1-2 gal/ treated A	DANGER , 1 ^C , 3 gal ^D , see Field Foliar Treatments , see label
		<i>Du Pont</i>	incorporate	
Cottony leak (<i>Pythium</i>) and damping off	metalaxyl	Ridomil 50W ¹⁻²¹ 50%	2-4 lb /treated A	WARNING , 1 ^D , see label
		<i>Ciba</i>		
		Ridomil 2E ¹⁻²¹ 25.1%	4-8 pt /treated A	WARNING , 1 ^D , see label
		<i>Ciba</i>		
Cephalosporium wilt	benomyl	Benlate WP 50% ¹⁴	8 oz/10 gal /A in-furrow	CAUTION , 8 oz ^D , see label
Alternaria leaf spot, angular leaf spot, anthracnose	copper (metallic equivalent)	Basic Copper 53 ^{2,7,14,17,18} 53%	4 lb/A	WARNING , pre-emergence, see label
		<i>Micro Flo</i>		

B. Seed Treatments (see also ALL VEGETABLES, page 2)

Damping off ^V , (<i>Pythium</i>) damping off ^W , seedling blight/disease ^X , seed rot/decay ^Y , seed storage loss ^Z	oxadixyl	Anchor F ^{2,7,10,14,17, 19-21,W} 29.5% Gustafson	1.5 oz/100 lb	CAUTION , see label
	captan	Captan 75 Slurry or 75 D 75% ^{2,7,17,18,21, V,Y} Wilbur-Ellis	see labels	DANGER , see labels
		Captan 75 ^{V,X-Z} 73.3% Gustafson	1.33 ^{2,18, 27, 8^{17,21}} oz/100 lb	DANGER , see label
		Captan Sprills ^{2,7,17, 18,21,V,Y} 62.9% Wilbur-Ellis	see label	DANGER , see label
		Captan 4000 ^{2,7,15,17, 18,21,V,X-Z} 39.6% Wilbur-Ellis	see label	DANGER , see label
		Captan 400 or 400-D 38.25% ^{2,7,15,17,18,21, V,Z} Gustafson	1.5-2 ^{15,17,18,21} or 2.5-3 ^{2,7} oz/100 lb	DANGER , see labels

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

CUCURBIT CROPS, continued

		Captan 300 ^{2,7,15,17,18,21,V,Z} 29.35%	1.67 ^{15,17,18,21} , 2.33 ^{2,7}	DANGER , see label
		Gustafson	oz/100 lb	
	thiram	Thiram 50WP Dyed ^{2,7,17-21,V,X,Y} 50%	4.5 oz/100 lb	CAUTION , see label
		Gustafson	lb	
		42-S Thiram ^{2,7,17-21,V,X,Y} 42% Gustafson	4.5 oz/100 lb	CAUTION , see label
	lindane + captan (25%+12.2%)	Isotox Seed Treater-F or Treater (F) 37.5% ^{2,7,17,18,21,X} Wilbur-Ellis, Loveland	4 oz/100 lb	DANGER , see labels

C. Field Foliar Treatments

Root knot (except Javanese), lesion, ring, sting, and stunt nematodes	oxamyl	Vydate L ^{2,7,12,14,17,18,21} 24% Du Pont	2-4 pt/A	DANGER , 1 ^C , 3 gal ^D , 14-21 d interval, see Field Soil Treatments , see label
Alternaria (<i>Macrosporium</i>) leaf spot (blight) ^K , angular leaf spot ^L , anthracnose (<i>Colletotrichum</i>) ^M , bacterial fruit blotch ^N , bacterial ice nucleation ^O , bacterial wilt ^P , Cercospora leaf spot ^Q , cucumber belly rot (<i>Rhizoctonia solani</i>) ^R , downy mildew ^S , gummy stem blight [black rot] (<i>Didymella</i>) ^T , powdery mildew ^U , powdery mildew (<i>Erysiphe cichoracearum</i>) ^V , powdery mildew (<i>Spaerotheca</i> only) ^W , Pythium fruit rot ^X , scab ^Y , target spot (<i>Corynespora</i>) ^Z	metalaxyl + mancozeb (8%+64%)	Ridomil MZ 72 WP ^{2,3,6,7,12,14,19,21,S} 72% Ciba	2-2.5 lb/A	CAUTION , 5 ^C , 4 ^D , 14 d interval, see label
	(10%+48%)	Ridomil MZ 58 WP ^{2,3,6,7,12,14,19,21,S} 58% Ciba	1.5-2 lb/A	WARNING , 5 ^C , 4 ^D , 14 d interval, see label
	metalaxyl + copper metallic equivalent (10%+39.1%)	Ridomil/Copper 70WP ^{1-21,S} 70% Ciba	1.5-2 lb/A	DANGER , 5 ^C , 4 ^D , 14 d interval, see label
	metalaxyl + chlorothalonil (9%+72%)	Ridomil/Bravo 81W WS ^{2,3,6-8,11,12,15-21,K,M,Q,S,T,Y} 81% Ciba	2-3 ^{K,M,Q,T,Y} , 1.5-2 ^S lb/A	DANGER , 0 ^C , 4 ^D , 10-14 ^{K,M,Q,T,Y} or 14 ^S d interval, see label
	copper (metallic equivalent)	Microspense C.O.C. 53 WP ^{(2,12,15,O,S)(7,L,M,O,Q,S)(17,18,K,L,M,O,S,V)} Basic Copper 53 ^{2,7,14,17,18,K-M,P,Q,S-U,Y} 53% Micro Flo, Griffin	see labels	DANGER, WARNING , 0 ^C , see labels

CUCURBIT CROPS, continued

Kocide 101 WP^(2,12,15,0,S) (21,O,M,S) (7,O,L,S) (17-18,0,U) ; Blue Shield
 WP^(2,12,15,0,S) (7,O,L,S) (17,18,0,U) (21,O,M,S)
 or DF^(2,12,15,0,S) (7,O,L,S) (17,18,0,U) (21,O,M,S) ; Champion
 WP^(2,12,15,0,S) (7,O,L,S) (17,18,0,U) (21,O,M,S) ; C-O-C-S
 WDG^{7,14,17-21,K-M,P,Q,S,Z}
 50%
 Griffin, Micro Flo, Agtrol, Platte

see labels

DANGER, CAUTION, 0^C, see labels

Kocide DF^(2,12,15,0,S) (21,M,N,O,S) (7,O,L,S) (17,18,0,U)
 40% Griffin

see label

DANGER, 0^C, see label

Kocide 606^(2,12,15,0,S) (7,O,L,S) (17,18,0,U) (21,O,M,S) , Blue Shield
 3L^(2,12,15,S) (7,L,S) (17,18,U) (21,M,S) , Champ Formula 2
 F^(2,12,15,0,S) (7,O,L,S) (17,18,0,U) (21,O,M,S) , 3 Lb

see labels

DANGER, CAUTION, 0^C, see labels

Copper F^(2,12,15,S) (7,L,S) (17,18,U) (21,M,S)
 24.4%
 Griffin, Micro Flo, Agtrol, Setre

Kocide LF^(2,12,15,0,S) (21,O,M,S) (7,O,L,S) (17,18,0,U) Champ F^(2,12,15,0,S) (21,O,M) (7,O,L,S) (17,18,0,U) (21,O,S)

see labels

CAUTION, 0^C, see labels

Cuproxat F^(2,7,12,15,17,18,21,K-M,P,Q,S-U,Y) (17,18,U) 15% Griffin, Agtrol, Micro Flo

copper + zinc (metallic equivalents 4%+4%)

Copper-Z 4/4 F^(7,19,20,K,L,U) (2,12,15,21,K,L,S,U,Y) 8%
 Setre, Helena

31-72 oz/A

DANGER, 0^C, 5-7 d interval, see label

fosetyl-aluminum)

Aliette WDG^{1,4,7,9,10,14,18-21,S} 80%
 Rhône-Roulenc

2-3 (tank mixed), 3-5 lb/A

CAUTION, 0^C, 7^D, 7-14 d interval, see label

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables. Signal words: CAUTION for slightly toxic; WARNING for moderately toxic; DANGER for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}	
CUCURBIT CROPS, continued	dithiocarbamate (mancozeb, maneb)	Maneb 80 ^(2,3,6,12,14,21,K,M,S,T) (7, K-M, S, X) (17, L, S) (19, 20, M, S)	see labels	CAUTION, 5 ^c , 7-10 interval, see labels	
		Penncozeb ^(2,3,6,12,14,21,K,M,Q,S,T) (7, K-M, S, X) (19, M, S), Dithane M-45 ^(2,3,6,12,14,15,K,M,S,T) (7, M, Q, S, T, Y) (19, S) (21, K, M, Q, S, T, Y), Mancozeb 80WP ^(2,3,6,12,21,K,M,Q,S,T) (7, M, Q, S, T, Y) (19, S)			
		80% Elf Atochem, Rohm and Haas, Platte			
		Maneb 75DF ^(2,3,6,12,14,21,K,M,Q,S,T) (7, K-M, S, X) (17, L, S) (19, 20, M, S)	see labels	CAUTION, 5 ^c , 7-10 d interval, see labels	
		Penncozeb DF ^(2,3,6,12,14,21,K,M,Q,S,T) (7, K-M, S, X) (19, M, S), Man-zate 200 ^(2,3,6,12,14,21,K,M,Q,S,T) (7, M, Q, S, T, Y) (19, S)			
		Dithane DF ^(2,3,6,12,14,15,K,M,S,T) (7, M, Q, S, T, Y) (19, S) (21, K, M, Q, S, T, Y) 75% Elf Atochem, Du Pont, Rohm and Haas			
		Dithane F-45 ^(2,3,6,12,14,15,K,M,S,T) (7, M, Q, S, T, Y) (19, S) (21, K, M, Q, S, T, Y), Manex F With Zinc ^(2,3,6,12,14,21,K,M,Q,S,T) (7, K-M, S, X) (17, L, S) 37% Rohm and Haas, Griffin	see labels	CAUTION, 5 ^c , 7-10 d interval, see labels	
		chlorothalonil	Terranil 90DF ^(2,12,15,17,18,21,K,M,Q,S,T,Y) (7, K, M, R-T, Y, Z) or 90DF WSP ^(2,12,15,17,18,21,K,M,Q,S,T,Y) (7, K, M, R-T, Y, Z) 90% Riverside/Terra	see labels	DANGER, 0 ^c , 7 d interval, see labels
			Bravo Ultrex ^(2,12,15,17,18,21,K,M,Q,S,T,W,Y,Z) (7, K, M, Q-T, W, Y, Z) 82.5% ISK Biosciences	1.4-1.8 lb/A	DANGER, 0 ^c , 7 d interval, see label
			Bravo W-75 ^(2,7,12,15,17,18,21,M,Q,S,T,W,Y,Z) 75% ISK Biosciences	1.5-3 lb/A	DANGER, 0 ^c , 7 d interval, see label
	Terranil 6L ^(2,12,15,17,18,21,K,M,Q,S,T,W,Y,Z) (7, K, M, Q-T, W, Y, Z), Bravo 720 or Weather Stik ^(2,12,15,17,18,21,K,M,Q,S,T,W,Y,Z) (7, K, M, Q-T, W, Y, Z), Agronil 720 ^(2,7,12,15,17,18,21,K,M,Q-T,W,Y,Z) 54% Riverside/Terra, ISK Biosciences, Setre	see labels	WARNING, 0 ^c , 7 d interval, see labels		

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
CUCURBIT CROPS, continued				
		Bravo 500 ^(2,12,15,17,18,21,K,M,Q,S,T,W,Y,Z) (7,K,M,Q-T,W,Y,Z)	see labels	WARNING , 7 d interval, see labels
		Chlorothalonil 4L ^(2,12,15,17,18,21,K,M,Q,S,T,Y) (7,K,M,R-T,Y,Z), Evade F ^(2,12,15,17,18,21,M,Q,S,T,Y) (7,K,M,R-T, Y)		
		40.4% ISK Biosciences, Riverside/Terra, Platte		
	chlorothalonil + triadimefon (40%+2.2%)	Reach F ^{2,7,12,15,17,18,U} 42.2% ISK Biosciences	3-4.25 pt/A	DANGER , 14 d interval, see label
	triadimefon	Bayleton 50% DF ^{1,21,V} Bayer	2-4 oz/10 (ground), 5 (air) gal/A	CAUTION , 0 ^C , 16 oz ^D , 14 d interval, see label
	thiophanate-methyl	Topsin M 85WDG ^{7,14,17,19,20,M,T,U,Z} 85% Elf Atochem	0.2-0.4 lb/A	CAUTION , 7-14/7 ^{7,Z} d interval, see label
		Topsin M 70W or WSB 70% ^{7,14,17,19,20,M,T,U,Z} Elf Atochem	0.25-0.5 lb/A	CAUTION , 7-14 or 7 ^{7,Z} d interval, see label
	benomyl	Benlate WP ^{7,14,17,18,M,T,U,Z} 50% Du Pont	4-8 oz/50 gal (ground), 8 oz/5 gal (air)/A	CAUTION , 1 ^C , 2 lb ^D , 7-14 or 7 d ^Z interval, see label
	sulfur	Microspurse W Sulfur ^{7,14,18,U} , Dual Spraying and D Sulfur ^{7,14,18,U} , 90% Sulfur D ^{14,U} 90% Micro Flo, Setre	25, 10-20 lb/A	CAUTION , 0 ^C , see label
		Microthiol Special ^{7,14,18,U} , Thiolux DF Micronized ^{1-21,U} 80% Elf Atochem; Sandoz, Platte	see labels	CAUTION , 0 ^C , see labels
		Sulfur 6L or F 6 52% ^{7,14,18,U} Micro Flo, Riverside/Terra, Platte	4 gal/A	CAUTION , 0 ^C , see labels
	sulfur elemental + copper metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{2,7,15,17,18,21,S,U} 58.4% Stoller	0.5-1 qt/A	CAUTION , 0 ^C , 7-10 d interval, see labels

D. Greenhouse Treatments (see also ALL VEGETABLES, pages 2-3)

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
CUCURBIT CROPS, continued				
White mold (<i>Sclerotinia sclerotiorum</i>)	dicloran	Botran 75W ⁷ 75% Gowan	1.33 lb/100 gal, 500 gal/A max.	CAUTION , 14 d interval, see label
Angular leaf spot, downy mildew	copper (metallic equivalent)	Kocide DF ⁷ 40% Griffin	1.5-2 Tbsp/1000 sq ft	DANGER , 0 ^c , 7 d interval, see label

EGGPLANT

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Plant parasitic nematodes	fenamiphos	Nemacur 3 E 35% Bayer	5.9 oz/1000 ft of row	DANGER , 1 ^D , see label
		Nemacur 15% G Bayer	14.7 oz/ 1000 ft row	DANGER , 1 ^D , see label
	oxamyl	Vydate L 24% Du Pont	1 gal/A banded	DANGER , 7 ^C , 3 gal ^D , see Field Foliar Treatments , see label
Crown rot (<i>Phytophthora capsici</i>), damping off (<i>Pythium</i>)	metalaxyl	Ridomil 50W 50% Ciba	2-4 lb/20- 50 gal/ treated A, 2 lb/ treated A side dress	WARNING , 7 ^C , 3 ^D , 6 lb ^D , 30 d interval, see label
		Ridomil 2E 25.1% Ciba	4-8 pt/20- 50 gal/ treated A; 4 pt/ treated A side dress	WARNING , 7 ^C , 12 pt ^D , 30 d interval, see label

B. Seed Treatments

Damping off ^W , damping off (<i>Pythium</i>) ^X , seed rot/decay ^Y , seedling blight/disease ^Z ,	oxadixyl	Anchor F ^X 29.5% Gustafson	1.5 oz/100 lb	CAUTION , see label
		captan	Captan 75 Slurry or 75 D 75% ^{W,Y} Wilbur-Ellis	4, 6 oz/100 lb
	Captan 75 ^{W,Y} 73.3% Gustafson		4 oz/100 lb	DANGER , see label
	Captan Sprills ^{W,Y} 62.9% Wilbur-Ellis	4.25 oz/100 lb	DANGER , see label	
	thiram	Thiram 50WP Dyed ^{W,Y} , ^Z 50% Gustafson	6 oz/100 lb	CAUTION , see label
		42-S Thiram ^{W,Y,Z} 42% Gustafson	6.5 oz/100 lb	CAUTION , see label

C. Field Foliar Treatments (see also ALL VEGETABLES, page 2)

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
EGGPLANT, continued				
Plant parasitic nematodes	oxamyl	Vydate L 24% Du Pont	2 qt/A	DANGER , 1 ^c or 7 ^c , 3 gal ^D , 7-14 d interval, see Field Soil Treatments , see label
Anthracnose ^U , Cladosporium leaf mold ^V , early blight ^W , gray leaf spot (<i>Stemphyllium</i>) ^X , late blight ^Y , Septoria leaf spot ^Z	dithiocarbamate (mancozeb, maneb)	Maneb 80 ^{U-Z} 80% <i>Elf Atochem</i>	1.5-2 lb/A	CAUTION , 5 ^c , 14 lb ^D , 7-10 d interval, see label
		Maneb 75DF ^{U-Z} 75% <i>Elf Atochem</i>	1.5-2 lb/A	CAUTION , 5 ^c , 14.9 lb ^D , 7-10 d interval, see label
		Manex F with Zinc 37 ^{U-Z} Griffin	1.2-1.6 qt/A	CAUTION , 5 ^c , 11.2 qt ^D , 7-10 d interval, see labels
Alternaria blight (leafspot) ^R , angular leaf spot ^S , anthracnose ^T , bacterial ice nucleation ^U , bacterial wilt ^V , downy mildew ^W , <i>Phomopsis</i> ^X , <i>Phytophthora</i> blight ^Y , powdery mildew ^Z	copper (metallic equivalent)	Basic Copper 53 ^{R,T,X} , Microspense C.O.C. 53 WP ^{R,T,U,X} 53% <i>Micro Flo</i>	3-4 lb/A	WARNING, DANGER , 0 ^c , 7-10 d interval, see labels
		Kocide DF ^{R,T,U,X} 40% Griffin	2 lb/A	DANGER , 0 ^c , 7-10 d interval, see label
		Kocide 101 ^{R,T,U,X} , Blue Shield WP ^{R,T,U,X} or DF ^{R,T,U,X} , Champ- ion WP ^{R,T,U,X} , C-O-C-S WDG ^{R,T,W,Y} 50% Griffin, <i>Micro Flo</i> , <i>Agtrol</i> , <i>Platte</i>	see labels	DANGER, CAUTION , 0 ^c , see label
		Kocide 606 ^{R,T,U,X} , Blue Shield 3L ^{R,T,X} , Champ Formula 2 F ^{R,T,U,X} , 3 lb Copper F ^{R,T,X} 24.4% Griffin, <i>Micro Flo</i> , <i>Agtrol</i> , <i>Setre</i>	1.5 qt, 1.33 pt/A	DANGER, CAUTION , 0 ^c , 7-10 d interval, see labels
		Kocide LF ^{R,T,U,X} , Cu- proxat F ^{R,T,W,X} , Champ F ^{R,T,X,Y} 15% Griffin, <i>Micro Flo</i> , <i>Agtrol</i>	2.67 pt/A	CAUTION , 0 ^c , 7-10 d interval, see label
	sulfur elemental + copper metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{R,T,X} 58.4% <i>Stoller</i>	2 qt/A	CAUTION , 0 ^c , 7-10 d interval, see label

D. Greenhouse Treatments (see also ALL VEGETABLES, pages 2-3)

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
EGGPLANT, continued Alternaria leaf/ stem blight ^x , anthracnose ^y , <i>Phomopsis</i> ^z	copper (metallic equivalent)	Kocide 101 ^{x-z} 50% Griffin	4 Tbsp/1000 sq ft	DANGER, 0 ^c , 7-10 d interval, see label
		Kocide DF ^{x-z} 40% Griffin	2 Tbsp/1000 sq ft	DANGER, 0 ^c , 7-10 interval, see label

GARLIC

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Bulb and stem nematode	fenamiphos	Nemacur 15% G Bayer	9.2-18.4 oz /1000 ft of row	DANGER, 1 ^d , see label
White rot (<i>Sclero- tium cepivorum</i>)	iprodione	Rovral W 50% Rhône-Roulenc	4 lb/20 gal/A	CAUTION, at plant, see label
		Rovral 4 F 41.6% Rhône-Roulenc	4 pt/20 gal/A	CAUTION, at plant, see label
	dicloran	Botran 6 D 6% Wilbur-Ellis	250-400 lb/A	CAUTION, see label
	quintozene (PCNB)	PCNB 75 DG or WP; Terraclor WP 75% Amvac; Uniroyal	20 oz/1000 ft of row; see labels	CAUTION, 21 lb a.i. ^d , see labels
		Terraclor F 40% Uniroyal	5 gal/100 gal/A	CAUTION, 20 lb a.i. ^d , see label
	PCNB 2 Spray, 2-E L EC, Terraclor 2 Lb E 24% Wilbur-Ellis, Amvac, Uniroyal	see labels	CAUTION; DANGER, WARNING, 21 lb a.i. ^d , see labels	

B. Seed Treatments (see also ALL VEGETABLES, page 2)

White rot (<i>Sclerotium cepivorum</i>)	quintozene (PCNB)	PCNB 75 DG or WP, Terraclor WP 75% Amvac, Uniroyal	13.5 lb/ 1000 lb cloves	CAUTION, 21 lb a.i. ^d , see labels
		Terraclor F 40% Uniroyal	2.5 gal/ 1000 lb cloves	CAUTION, 20 lb a.i. ^d , see label

C. Field Foliar Treatments (see also ALL VEGETABLES, page 2)

Botrytis rot ^y , white rot (<i>Sclerotium cepivorum</i>) ^z	dicloran	Botran 75W ^{1-9,U,V} 75% Gowan	2.67-5.33 lb/100 gal (20-500 gal/A)	CAUTION, 1 ^d , see label
Downy mildew ^y , powdery mildew ^z	sulfur	Commercial D Sul- phur ^{y,z} 99.1% Inter- national Sulphur	10-30 lb/A	CAUTION, 0 ^c , see label
		Superfine W Sul- phur ^{y,z} 94% Inter- national Sulphur	5-10 lb/100 gal/A	CAUTION, 0 ^c , see label

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
GARLIC, continued				
		Microperse W Sul- fur ^z , Dual Spraying and D Sulfur ^z 90% <i>Micro Flo</i>	6 lb/A	CAUTION , 0 ^c , see label
		Microthiol Special ^z ; Thiolux DF Micronized ^z 80% <i>Elf Atochem;</i> <i>Sandoz, Platte</i>	3-10 lb/A	CAUTION , 0 ^c , see labels
		Sulfur 6L ^z or F 6 ^z 52% <i>Micro Flo,</i> <i>Riverside/Terra</i>	1 gal/A	CAUTION , 0 ^c , see labels
	metalaxyl + mancozeb (10%+48%) (8%+64%)	Ridomil MZ 58 WP ^y 58% <i>Ciba</i>	1.5-2 lb/A + spreader sticker	WARNING , 7 ^c , 4 ^d , 14 d interval, see label
		Ridomil MZ 72 WP ^y 72% <i>Ciba</i>	2-2.5 lb/A + spreader sticker	CAUTION , 7 ^c , 4 ^d , 14 d interval, see label
Bacterial ice nucleation ^w , Botrytis leaf blight (blast) ^x , downy mildew ^y , purple blotch ^z	chlorothalo- nil	Terranil 90DF or 90DF WSP 90% ^{x-z} <i>Riverside/Terra</i>	see labels	DANGER , see labels
		Bravo Ultrex ^{x-z} 82.5% <i>ISK Biosciences</i>	1.4-2.7 lb/A	DANGER , 7 ^c , 7-10 d interval, see label
		Bravo 720 or Weath- er Stik, Terranil 6L, Agronil 720 54% ^{x-z} <i>ISK Biosci-</i> <i>ences, Riverside/</i> <i>Terra, Setre</i>	1.5-3 pt/A	WARNING , 7 ^c , 7- 10 d interval, see labels
		Bravo 500 ^{x-z} , Chlo- rothalonil 4L ^{x-z} , Evade F ^{y,z} 40.4% <i>ISK</i> <i>Biosciences, River-</i> <i>side/Terra, Platte</i>	see labels	WARNING , 7 ^c , 7- 10 d interval, see labels
	copper (metallic equivalent)	Microperse C.O.C 53 WP ^{w,y,z} 53% <i>Micro Flo</i>	3-4 lb/A	DANGER , 0 ^c , 7-10 d interval, see label

HERBS [artichoke (Jerusalem)¹, basil², cassava³, chicory⁴, chives⁵, cilantro/Chinese parsley⁶, dill⁷, fennel⁸, ginger⁹, ginseng¹⁰, all herbs¹¹, horseradish¹², mint¹³ (peppermint²¹, spearmint²²), oregano¹⁴, parsley (curly¹⁵, flat leaf¹⁶, Chinese¹⁷), parsnip¹⁸, salsify¹⁹, watercress²⁰, yams²³]

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Plant parasitic nematodes ^y , Verticillium wilt ^z	dichloropro- pene + chloropicrin (77.9%+16.5%)	Telone C-17 ^{(12,18,19, y)^(13,y,z)} 94.4% <i>DowElanco</i>	see label	DANGER , see label
---	---	---	-----------	------------------------------

Rate and Formulation may differ for a specific **Disease** as shown by a superscript code from the end of the alphabet (^{x,y,z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
	dichloropropane	Telone III ^(12,18,19,Y) (13,Y,Z) 94% DowElanco	see label	WARNING, see label
Plant parasitic nematodes, soilborne plant pathogenic fungi	metam-sodium (sodium N-methylthiocarbamate)	Metam 426, Soil-Prep 42 42% ^{21,Z}	see labels	DANGER, see labels
		Amvac, Wilbur-Ellis		
		Vapam, Metam Sodium 33% ²¹ Zeneca, Amvac, Platte	see labels	DANGER, see labels
Root rot (<i>Phytophthora cactorum</i>) ^Y , <i>Pythium</i> / <i>Phytophthora</i> ^Z	metalaxyl	Ridomil 50W 50% Ciba	2-4 ^{1,3,4,9,10,12,18,19,23,Z} lb/ treated A	WARNING, 1 ^D , see label
		Ridomil 2E 25.1% Ciba	4-8 ^{1,3,4,9,12,18,19,23,Z} pt/treated A; 3 ^{10,Y} pt/100-400 gal/A	WARNING, 1 ^D , see label
		Ridomil 5G ^{10,Y} 5% Ciba	15 lb/A preseason, 10-15 lb/A side dress	CAUTION, 9 ^C , 60 lb ^D , 30 d interval, see label

B. Seed Treatments (see also ALL VEGETABLES, page 2)

Damping off ^X , early season <i>Phytophthora</i> ^Y , damping off (<i>Pythium</i>) ^Z	oxadixyl	Anchor F ^{15,16,18,Z} 29.5% Gustafson	1.5 oz/100 lb	CAUTION, see label
	metalaxyl	Apron 50W ^{7,Y,Z} 50% Gustafson	0.5-1 ^Z or 1 ^Y oz/100 lb	WARNING, see label
		Apron F ^{7,Y,Z} 28.35% Wilbur-Ellis	1.5 oz/100 lb	CAUTION, see label

C. Field Foliar Treatments (see also ALL VEGETABLES, page 2)

Early blight, late blight	dithiocarbamate (mancozeb, maneb)	Dithane M-45 ⁷ , Mancozeb 80WP ⁸ , Penncozeb ⁸ 80% Rohm and Haas, Platte	2, 1.5-2 lb/A	CAUTION, 14 ^C , 16 lb ^D , 7-10 d interval, see labels
		Penncozeb DF ⁸ , Manzate 200 DF ⁸ , Dithane DF ⁸ 75% Elf Atochem, Du Pont, Rohm and Haas	see labels	CAUTION, 14 ^C , 7-10 d interval, see labels
		Dithane F-45 ⁷ 37% Rohm and Haas	1.6 qt/A	CAUTION, 14 ^C , 12.8 qt ^D , 7-10 d interval, see label

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
HERBS, continued				
Alternaria leaf spot and stem blight ^P , anthracnose ^Q , bacterial blight (<i>Pseudomonas</i>) ^R , bacterial diseases ^S , bacterial ice nucleation ^T , Botrytis blight (grey mold) ^U , bottom rot (<i>Rhizoctonia</i>) ^V , Cercospora leaf spot ^W , downy mildew ^X , rust ^Y , Septoria leaf spot ^Z	chlorothalonil	Terranil 90DF or 90DF WSP 90% ^{18,P,Q,U,V,X} Riverside/Terra	see labels	DANGER , see labels
		Bravo Ultrex ^(13,Y,Z) 85% (18,P,Q,U,V,X) ISK Biosciences	see labels	DANGER , see label
		Terranil 6L ^{18,P,Q,U,V,X} , Bravo 720 or Weather Stik ^(13,Y,Z) (18,P,Q,U,V,X), Agro-nil 720 ^{18,P,Q,U,V,X} 54% Riverside/ Terra, ISK Biosciences, Setre	see labels	WARNING , see labels
		Bravo 500 ^(13,Y,Z) (18,P,Q,U,V,X), Chlorothalonil 4L ^(18,P,Q,U,V,X) , Evade F ^(18,P,Q,U,V,X) 40.4% ISK Biosciences, Riverside/Terra, Platte	see labels	WARNING , see labels
	copper (metallic equivalent)	Kocide 101 ^(5,T,X) (10,P,T) (15,R,T) (20,T,W), Champion WP ^{10,P,T} , Blue Shield DF ^{10,P,T} 50% Griffin, Agtrol, Micro Flo	see labels	DANGER , 0 ^C , see label
		Kocide DF ^(5,T,X) (10,P,T) (15,R,T) (20,T,W) 40% Griffin	see labels	DANGER , 0 ^C , see labels
		Kocide 606 ^{10,P,T} , Blue Shield 3L ^{10,P} , Champ Formula 2 F ¹⁰ , ^{P,T} 3 Lb Copper F ^{10,P} 24.4% Griffin, Micro Flo, Agtrol, Setre	2.33 qt, 1.75 pt/A	DANGER, CAUTION , 0 ^C , 7 d interval, see labels
		Kocide LF ^(5,T,X) (10,P,T) (15,R,T) (20,T,W), Champ F ^{10,P,T} 15% Griffin, Agtrol	see labels	CAUTION , 0 ^C , see labels
Phytophthora cactorum foliar and root rot	fosetyl-aluminum	Aliette WDG ¹⁰ 80% Rhône-Roulenc	5 lb/100 gal/A	CAUTION , 31 ^C , 9 ^D , 7 d interval, see label
Alternaria blight (<i>Alternaria panax</i>)	iprodione	Rovral W ¹⁰ 50% Rhône-Roulenc	1.5-2 lb/ 10 gal/A	CAUTION , 36 ^C , 10 ^D lb, 14 d (alone) or 7 d interval (tank mix), see label

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables. Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
HERBS, continued				
		Rovral 4 F ⁷ 41.6% Rhône-Roulenc	1-2 pt/10 gal/A	CAUTION , 36 ^C , 14 d (alone) or 7 d (tank mix) interval, see label
Powdery mildew	sulfur	Thiolux DF Micronized ^{21,22} 80% Platte	4-6 lb/A	CAUTION , 30 ^C , 30 d interval, see label
		That F Sulfur ^{21,22} 52% Stoller	3.25-6.25 pt/A	CAUTION , 28 ^C , 14 d interval, see label

LEGUME VEGETABLES [bean¹ {broad/fava², bush³, colored⁴, dry⁵, field⁶, French⁷, green⁸, kidney⁹, lima¹⁰, large lima¹¹, baby bush lima¹², navy¹³, pinto¹⁴, pole¹⁵, runner¹⁶, snap¹⁷, string¹⁸, succulent¹⁹, wax²⁰}, lentil²¹, chick pea/garbanzo bean²², leguminous plants²³, lupine²⁴, mung bean²⁵, pea²⁶ (black-eyed²⁷, catjang²⁸, cowpea²⁹, crowder³⁰, field³¹, garden³², southern³³, sugar³⁴), soybean (edible)³⁵]

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Plant parasitic nematodes	ethoprop	Mocap EC ^{11,17} 69.6% Rhône-Roulenc	2-4.4 oz/ 1000 row ft, 1-1.33 gal/A (broadcast)	DANGER , see label
		Mocap 10% G ^{11,17} Rhône-Roulenc	1.4-2 lb/ 1000 row ft, 60-80 lb/A (broadcast)	WARNING , see label
	aldicarb	Temik 15G ⁵ 15% Rhône-Roulenc	7-14 lb/A, 7.5-15 oz/ 1000 ft of row	DANGER , at plant, 90 ^C , 1 ^D and 14 lb ^D , see label
Damping off and root rot (<i>Pythium</i>)	metalaxyl	Ridomil 2E ¹⁻³⁵ 25.1% Ciba	2-4 pt/ treated A	WARNING , 1 ^D , see label
Damping off, seed and seedling rots (<i>Pythium</i> , <i>Rhizoctonia</i>)	quintozene (PCNB) + metalaxyl (10%+1%)	Ridomil PC 11G ^{3,5,8,15} 11% Ciba	12 oz/1000 linear ft at planting	CAUTION , 1 ^D , see label
Root and stem rot (<i>Rhizoctonia</i> <i>solani</i>) ^Y , white mold (<i>Sclerotinia</i> <i>sclerotiorum</i>) ^Z	quintozene (PCNB)	PCNB 75 WP or DG ^{1,5,} ^{17,Y,Z} ; Terraclor WP ^{5,17,19,Y} 75% Amvac, Uniroyal	see labels	CAUTION , see labels
		Terraclor F ^{5,17,19,Y} 40% Uniroyal	2-3 pt/8-10 gal/A	CAUTION , see label
		PCNB 2-E L EC ^{1,3,5,} ^{15,17,Y,Z} , PCNB 2 Spray ^(1,Y) (5,17,Z), Terraclor 2 Lb E ^{5,17,19} 24% Amvac, Wilbur- Ellis, Uniroyal	see labels	DANGER , CAUTION , WARNING , see labels

Disease^A Ingredient Formulation^A Rate^A Remarks^{A,B}

LEGUME VEGETABLES, continued

		PCNB 10% G ^{1,Y} ; Ter- raclor 10% G ^{1,Y} Ampvac, Platte; Uniroyal	see labels	CAUTION, see labels
Damping off (<i>Rhiz- octonia</i> , <i>Fusarium</i>)	thiophanate- methyl	Topsin M 5G ¹ 5% Platte	14-28 lb/A	CAUTION, see label
Fusarium root rot	benomyl	Benlate 50% WP ¹⁷ Du Pont	12-16 oz/15 gal/A	CAUTION, see label
B. Seed Treatments (see also ALL VEGETABLES, page 2)				
<i>Fusarium</i> ^V , <i>Rhizoc- tonia</i> ^W , <i>Pythium</i> damping off ^X , early season <i>Phytophthora</i> ^Y , systemic downy mildew ^Z	benomyl	Benlate WP ^{17,V} 50% Du Pont	6 oz/50 lb	CAUTION, see label
	oxadixyl	Anchor F ^{26,X,Y} 29.5% Gustafson	1.5-2.25 oz/100 lb	CAUTION, see label
	metalaxyl	Apron 50W ^{6,8-13,15,17- 22,24,26,29,31,32,35,X-Z} 50% Ciba, Gustafson	see labels	CAUTION, WARNING, see labels
		Apron F ^{(26,X-Z)(6,8-13, 15,17-22,24,29,31,32,35, X,Y)} 28.35% Wilbur-Ellis	see label	CAUTION, see label
		Apron 25W ^{6,8-13,15,17- 22,24,26,29,31,32,35,X-Z} 25% Ciba	2 ^{X,Y} or 5 ^{26,X,Z} oz/100 lb	CAUTION, see labels
	quintozene (PCNB) + metalaxyl + <i>Bacillus</i> <i>subtilis</i> GBO3 (16.67%+4.25% +0.1%)	System 3 ^(1,X,W) ^(26,W-Y) 21.02% Setre	2-3 ¹ , 4-6 ²⁶ oz/bu	CAUTION, see label
	quintozene (PCNB)	PCNB 23 L EC ^{1,26,V,W} , RTU-PCNB ^{1,26,V,W} 24% Ampvac, Gustafson	see labels	DANGER, CAUTION, see labels
		PCNB 2 LF or F 20% ^{1,26,V,W} Ampvac, Wilbur-Ellis	4 ¹ , 4-8 ²⁶ oz/100 lb	CAUTION, see labels
Damping off ^W , seedling blight/disease ^X , seed rot/decay ^Y , seed storage loss ^Z	captan	Captan 75 Slurry or 75 D ^{1,26,29,W,Y} , Captan 75 ^{1,26,29,W,Y} 75% Wilbur-Ellis	see labels	DANGER, see labels
		Captan 75 ^{1-11,13-20, 26,29,32,33,W,Y} 73.3% Gustafson	1 ²⁶ , 1.75 ¹⁻²⁰ , 2 ²⁹ oz/100 lb	DANGER, see label
		Captan Sprills ^{1,26, 29,W,Y} 62.9% Wilbur-Ellis	see label	DANGER, see label

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables. Signal words: CAUTION for slightly toxic; WARNING for moderately toxic; DANGER for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

LEGUME VEGETABLES, continued

		Captan 4000 ^{5,17,21,26,29,W-Z} 39.6% Wilbur-Ellis	see label	DANGER, see label
		Captan 300 ^{5,17,21,26,29,W-Z} 29.35% Gustafson	2 ^{21,26} or 2.25 ^{5,17,29} oz/100 lb	DANGER, see label
		Captan 400 or 400-D ^{5,17,21,26,29,W-Z} 28.25% Gustafson	2.5 ^{21,26} or 2-3 ^{5,17,29} oz/100 lb	DANGER, see label
	maneb + captan (30%+30%)	Granox P-F-M ^{35,Y} 60% Wilbur-Ellis	3.33-5 oz/100 lb	DANGER, see label
Pod and stem blight (Phomopsis) ^T , Rhizoctonia (soreshin) ^U , Pythium ^V , Sclerotium rolfsii ^W , damping off ^X , seed rot/decay ^Y , seedling blight/disease ^Z	chloroneb + metalaxyl (30%+3.5%)	Nu-Flow AD, Delta-Coat AD 33.5% ^{6,8-13,15,17-20,24,27,29,U,V,X} Wilbur-Ellis	5.5-7 oz/100 lb	CAUTION, see labels
	chloroneb	Chloroneb 65W ^{1,U-X,Z} 65% Gustafson, Kincaid	4 oz/100 lb	CAUTION, see labels
		Nu-flow D ^{1,U,V,X} 30% Wilbur-Ellis	7 oz/100 lb	WARNING, see label
	captan + diazinon (37.5%+25%)	Agrox 2-Way ^{1,26,X-Z} 62.5% Wilbur-Ellis	2 oz/bu	DANGER, hopper box, see label
	captan + diazinon + lindane (15%+15%+25%)	Agrox D-L Plus ^{1,26,X-Z} , Kernel Guard ^{1,26,X-Z} 55% Wilbur-Ellis, Riverside/Terra	see labels	DANGER, hopper box, see labels
	lindane + captan (25%+12.5%)	Isotox Seed Treater-F ^{1-20,26,U-Z} or Treater (F) ^{1,3,11,17,26,Z} 37.5% Wilbur-Ellis, Loveland	see labels	DANGER, see labels
	captan + quintozone (PCNB) + thiabendazole (20.25%+8.4%+1%)	Rival F ^{5,T,U,X-Z} 29.65% Gustafson	3 oz/100 lb	DANGER, see label
	thiram	Thiram 50WP Dyed ^{5,11,17,26,29,X-Z} 50% Gustafson	2 ^{5,17,29} or 3 ^{11,26} oz/100 lb	CAUTION, see label
		42-S Thiram ^{5,11,17,26,29,X-Z} 42% Gustafson	2 ^{5,17,29} or 3 ^{11,26} oz/100 lb	CAUTION, see label
	carboxin + thiram (14.9%+13.2%)	Vitaflo-280 ^{1,X,Y} 28.1% Gustafson	4 oz/100 lb	CAUTION, see label
	carboxin + thiram (5.7%+5.7%)	Vitavax-CT ^{5,U} 11.4% Setre	6 oz/bu	CAUTION, see label

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
LEGUME VEGETABLES, continued				
	carboxin + diazinon + lindane (14%+15%+25%)	KickStart ^{1,Y,Z} 54% Setre	1.8 oz/50 lb	CAUTION, see label
	carboxin	Vitavax-34 ^{1,Z} 34% Gustafson	3-4 oz/100 lb	CAUTION, see label
Seed and seedling disease (<i>Rhizoctonia</i> , <i>Fusarium</i> , <i>Pythium</i>)	carboxin + thiram (10%+10%)	RTU-Vitavax-Thiram ⁵ 20% Gustafson	6.8 oz/100 lb	CAUTION, see label
Root disease (<i>Rhizoctonia</i> , <i>Fusarium</i> ^Y , <i>Rhizobium</i> nodulation improvement ^Z)	<i>Bacillus subtilis</i> GBO3	Kodiak Concentrate Biological Fungicide ^{1-35,Y,Z} 2.75% Gustafson	0.125 oz/100 lb	CAUTION, also for reformulation, see label
	<i>Bacillus subtilis</i> MBI 600	Epic Biological Fungicide ^{1-35,Y,Z} 2.75% Gustafson	0.25-0.5 ^Z or 0.25-1 ^Y oz/100 lb	CAUTION, see label
Halo blight	streptomycin sulfate	Agricultural Streptomycin ¹ 62.6% Gustafson	1-5% (2.67-13.33 oz/gal)	CAUTION, see label

C. Field Foliar Treatments (see also ALL VEGETABLES, page 2)

Angular leaf spot ^N , anthracnose ^O , bacterial blight (halo & common) ^P , bacterial ice nucleation ^O , botrytis blight [gray mold] (<i>Botrytis</i>) ^R , brown spot ^S , <i>Cercospora</i> leaf spot ^T , downy mildew ^U , leaf spot ^V , powdery mildew ^W , rust ^X , <i>Septoria</i> leaf spot ^Y , white mold (<i>Sclerotinia</i>) ^Z	dithiocarbamate (mancozeb, maneb)	Maneb 80 ^{5,O,U,X} 80.0% <i>Elf Atochem</i>	1.5-2 lb/A	CAUTION, 30 ^C , 12 lb ^D , 5-7 d interval, see label
		Maneb 75DF 75.0% ^{5,O,U,X} <i>Elf Atochem</i>	1.5-2 lb/A	CAUTION, 30 ^C , 12.8 lb ^D , 5-7 d interval, see label
		Manex F With Zinc ^{5,O,U,X} 37% <i>Griffin</i>	1.2-1.6 qt/A	CAUTION, 30 ^C , 9.6 qt ^D , 5-7 d interval, see label
	chlorothalonil	Terranil 90DF ^(5,9-14, O,U,X) (17,R,X) (27,O,T,U,X,Y) or 90DF WSP ^(5,9-14, O,U,X) (17,R,X) (27,O,T,U,X) 90% <i>Riverside/Terra</i>	see labels	DANGER, see labels
		Bravo Ultrex ^(5,O,U,X) (17,R,X) (27,O,T,U,X) 82.5% <i>ISK Biosciences</i>	see label	DANGER, see label
		Bravo W-75 ^{17,X} 75% <i>ISK Biosciences</i>	3 lb/A	DANGER, 7 ^C , 7 d interval, see label

Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables. Signal words: CAUTION for slightly toxic; WARNING for moderately toxic; DANGER for highly toxic. Number of days from the last application until harvest (pre-harvest interval). Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
		Terranil 6L ^(5,9-14,0, U,X) (17,R,X) (27,0,T,U,X), Bravo 720 or Weather Stik ^(5,9-14,0,U,X) (17,R,X) (27,0,T,U,X), Agronil 720 ^(5,9-14,27,0,T,U,X) (17,R,X) 54% Riverside/ Terra, ISK Biosciences, Setre	see labels	WARNING, see labels
		Bravo 500, Chlorothalonil 4L ^(5,9-14,0, U,X) (17,R,X) (27,0,T,U,X), Evade F ^(5,9-14,0, U,X) (17,R,X) (27,T) 40.4% ISK Biosciences, Riverside/ Terra, Platte	see labels	WARNING, see labels
	sulfur + chlorothalonil (27%+19%)	Bravo S F ^{17,R,W,X} 46% ISK Biosciences, Setre, Helena	4-8 ^X or 8 ^{R,W} pt/A	CAUTION, 7 ^C , 7 d interval, see label
	thiophanate-methyl	Topsin M 85WDG ^{1,5,10,17,R,Z} 85% Elf Atochem	see label	CAUTION, 14 ^{5,17,C} or 28 ^{10,C} , see label
		Topsin M WSB or 70W ^{1,5,10,17,R,Z} 70% Elf Atochem	see label	CAUTION, 14 ^{5,17,C} or 28 ^{10,C} , see label
		Topsin M 4.5F ^{1,5-10,17,R,Z} 46.2% Elf Atochem	20-40 oz/A	CAUTION, 14 ^{5,17,C} or 28 ^{10,C} , see label
	benomyl	Benlate WP 50% ^{5,17,19,0,R,Z} Du Pont	8-24 ⁰ , 24-32 ^{R,Z} oz/A	CAUTION, 14 ^{5,17,C} or 28 ^{19,C} , 4 lb ^D , 7-10 d interval, see label
	iprodione	Rovral W ^{5,10,17,R,Z} 50% Rhône-Roulenc	1.5-2 lb/40 gal/A	CAUTION, 2 ^D , see label
		Rovral 4 F ^{5,10,17,R,Z} 41.6% Rhône-Roulenc	1.5-2 pt/40 gal/A	CAUTION, 2 ^D , see label
	dicloran	Botran 75W ^{3,15,17,Z} 75% Gowan	3 ³ /75 gal or 4 ¹⁵ lb/100 gal	CAUTION, 2 ^C , 7 d interval, see label
	copper (metallic equivalent)	Blue Shield WP ^(1,P,S,T) (26,W) or DF ^(1,P,Q) (26,W), Kocide 101 ^(1,P,Q,S) (26,Q,W), Champion WP ^(1,P,Q) (26,Q,W), C-O-C-S WDG ^{5,19,0,P,T,U} 50% Micro Flo, Griffin, Agtrol, Platte	see labels	DANGER, CAUTION, 0 ^C , see labels
		Kocide DF ^(1,P,Q,S) (26,Q,W) 40% Griffin	1.5-3 ^{26,Q,W} , 1-3 ^{1,P,Q,S} lb/A	DANGER, 7 ²⁶ d, 7-14 ¹ d interval, see label

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
LEGUME VEGETABLES, continued				
		Kocide 606 ^(1,P,Q) (26, Q,W), Blue Shield 3L ^(1,P) (27,W), Champ Formula 2 F ^(1,P,Q) (26,Q,W), 3 Lb Copper F ^(1,P) (27,W) 24.4% Griffin, Micro Flo, Agtrol, Setre	see labels	DANGER , CAUTION, 0 ^C , see labels
		Cuproxat F ^(1,N,O,P,U,V) (26,W), Champ F ^(1,P,Q) (26,Q,W), Kocide LF ^(5,8,P,S) (26,W) 15% Micro Flo, Agtrol, Griffin	see labels	CAUTION , 0 ^C , see labels
	copper + zinc (metallic equivalentents 4%+4%)	Copper-Z 4/4 F ^{1,P} 8% Setre, Helena	31-72 oz/A	DANGER , 0 ^C , 7-10 d interval, see label
	copper metallic equivalent + sulfur (16.9%+15%)	Kocide 404S ^(1,P,X) (27,W) 41% Griffin	1-3 ^{1,P} , 1.5-3 ^(1,X) (27,W) qt/A	DANGER , 0 ^C , 7 ²⁷ or 7-10 ^{1,X} or 7-14 ^{1,P} d interval, see label
	copper metallic equivalent + sulfur elemental (14.9%+15.5%)	Copper/Sulfur F ^(1,P,X) (27,W) 57% Micro Flo	1-3, 1.5-3 qt/A	WARNING , 0 ^C , see label
	sulfur elemental + copper metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^(1,P,U,W,X) (26,W) 58.4% Stoller	2 qt/A	CAUTION , 0 ^C , 7 ²⁶ d interval, see label
	sulfur	Commercial D Sulfur ^(1,X,W) (26,W) 99.1% International Sulphur	10-25 lb/A	CAUTION , 0 ^C , 7-10 d interval, see label
		D Sulfur ^(1,X,W) (26,W) 98% Platte	15-30 ¹ , 15-20 ²⁶ lb/A	CAUTION , 0 ^C , 7 ¹ or 7-14 ²⁶ d interval, see labels
		Superfine W Sulphur ^(1,X,W) (26,W) 94% International Sulphur	6-16 lb/A	CAUTION , 0 ^C , 7-14 d interval, see label
		Microspurse W Sulfur ^(1,W) (26,W,Y), Dual Spraying and D Sulfur ^{1,W,V} , 90% Sulfur D ^{1,26,W} , W Sulfur ^{1,26,W} 90% Micro Flo, Setre	3-5, 7, 15-20 lb/A	CAUTION , 0 ^C , 10-14 or 14 d interval, see labels

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}	
LEGUME VEGETABLES, continued					
	D Sulfur	(^{1,X,W}) (^{26,W})	84%	15-30 ¹ , 15-20 ²⁶ lb/A	CAUTION , 0 ^C , see labels
	Platte				
	Sprayable Sulfur	(^{1,V,W,X}) (^{26,W,X})		4-7 lb/100 gal	CAUTION , 0 ^C , 7-10 d interval, see label
	81.25%	Platte			
	Thiolux DF Micro-nized	(^{1,26,W,X}); Microthiol Special ^{1,W}		see labels	CAUTION , 0 ^C , see labels
	^V 80% Sandoz, Platte; Elf Atochem				
	EM-53 L Sulphur		53%	8 ^{4,5,8,11,17,W,X} , 2-7 ^{26,W} pt/A	CAUTION , 0 ^C , 7-14 ^{4,5,8,11,17} d interval, see label
	International Sulphur				
	That F Sulfur	^{4,5,8,11,17,V,W,X} 52%		4-8 pt/A	CAUTION , 0 ^C , 4 d interval, see labels
	Stoller				
	Sulfur 6L	(^{1,W,Y}) (^{26,W,Y}) or 6L (^{1,W,Y}) (^{26,W}) or F 6 (^{1,V,W}) (^{26,W,Y}), L Sulfur Six F ^{1,26,W} 52%		see labels	CAUTION , 0 ^C , 10-14 or 21 d interval, see labels
	Micro Flo, Riverside/Terra, Platte, Helena				

LETTUCE [head¹, leaf², endive³, escarole/broad leaved endive⁴, type not specified⁵]

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Damping off (<i>Pythium</i>)	metalaxyl	Ridomil 50W ¹ 50%	2-4 lb/	WARNING , 1 ^D , see label
		Ciba	treated A	
		Ridomil 2E ¹ 25.1%	4-8 pt/	WARNING , 1 ^D , see label
		Ciba	treated A	
		Ridomil 5G ¹ 5%	20-40 lb/	CAUTION , 1 ^D see label
		Ciba	treated A	

B. Seed Treatments (see also ALL VEGETABLES, page 2)

Damping off ^W , damping off (<i>Pythium</i>) ^X , seedling blight/disease ^Y , seed rot/decay ^Z	oxadixyl	Anchor F ^{5,X} 29.5%	1.5 oz/100 lb	CAUTION , see label
		Gustafson		
	thiram	Thiram 50WP Dyed ^{3,5,W,Y,Z} 50%	8 oz/100 lb	CAUTION , see label
		Gustafson		
		42-S Thiram ^{3,5,W,Y,Z} 42%	8 oz/100 lb	CAUTION , see label
		Gustafson		

C. Field Foliar Treatments (see also ALL VEGETABLES, page 2)

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
LETTUCE, continued				
Gray mold/rot (<i>Botrytis cinerea</i>) ^X , drop/watery soft rot (<i>Sclerotinia sclerotiorum</i> ^Y , <i>S. minor</i> ^W), bottom rot (<i>Rhizoctonia solani</i>) ^Z	dicloran	Botran 75W ^{1-4,W-Y} 75 [†]	see label	CAUTION, 14 ^C , see label
		Gowan		
	iprodione	Botran 6 D ^{1,X,Y} 6%	33.3 lb/A	CAUTION, 14 ^C , see label
		Rovral W ^{1,2,Y,Z} 50%	1.5-2 lb/40 gal/A	CAUTION, 14 ^C , 3 ^D , see label
vinclozolin	Rovral 4 F ^{1,2,Y,Z} 41.6% Rhône-Roulenc	1.5-2 pt/40 gal/A	CAUTION, 14 ^C , 3 ^D see label	
	Ronilan DF ^{X,Z} 50% BASF	1-2 lb/100 gal/A	CAUTION, 28 ^C , 3 ^D , 6 lb ^D , see label	
Anthracnose ^U , bacterial ice nucleation ^V , downy mildew ^W , leaf spot (<i>Cercospora</i>) ^X , powdery mildew ^Y , rust ^Z	dithiocarbamate (mancozeb, maneb)	Maneb 80 ^{1-3,W} 80%	1.5-2 lb/A	CAUTION, 10 ^C , 12 lb ^D , 7-10 day interval, see label
		Elf Atochem		
	copper (metallic equivalent)	Maneb 75DF DF ^{1-3,W} 75%	1.5-2 lb/A	CAUTION, 10 ^C , 12.8 lb ^D , 7-10 d interval, see label
		Elf Atochem		
Blue Shield WP ^{5,V,W} or DF ^{3-5,V,W} , Champ-ion WP ^{3-5,V,W} , C-O-C-S WDG ^{1,2,W} 50%	Manex F with Zinc 37% ^{1-3,W}	1.2-1-6 qt/A	CAUTION, 10 ^C , 9.6 ^D , 7-10 d interval, see labels	
	Griffin			
	Basic Copper 53 ^{1-5,W} 53%	1-3 lb/A	WARNING, 0 ^C , 7-10 d interval, see label	
Micro Flo	Blue Shield WP ^{5,V,W} or DF ^{3-5,V,W} , Champ-ion WP ^{3-5,V,W} , C-O-C-S WDG ^{1,2,W} 50%	1-2 lb or 1-3 lb/A	DANGER, CAUTION, 0 ^C , see labels	
	Micro Flo, Agtrol			
Champ Formula 2 F ^{3-5,V,W} , Blue Shield 3L ^{3-5,W} , 3 Lb Copper ^{3-5,W} 24.4%	Agrol, Platte, Setre	see labels	CAUTION, DANGER, 0 ^C , 7-10 d interval, see labels	
	Champ F ^{1-4,W,Y} , Cuproxat F ^{5,U,W,X} 15%	1.33-2.67 pt/A	CAUTION, 0 ^C , 7-10 d interval, see label	
Agrol, Micro Flo				
fosetyl-aluminum	Aliette WDG ^{5,W} 80%	2-3 (tank mixed), 3-5 lb/15 gal/A	CAUTION, 3 ^C , 7 ^D , 7-21 d interval, see label	
Rhône-Roulenc				

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables.
^B Signal words: CAUTION for slightly toxic; WARNING for moderately toxic; DANGER for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
LETTUCE, continued				
	metalaxyl	Ridomil 2E ^{1,2} 25.1% Ciba	0.5-1 pt/ 25-100 gal (ground) or 5-10 gal (air)/A with other fungicide	WARNING , 7 ^c or longer (see other label), 14 d interval, state label issued 6/24/91, SLN Reg. No. TX- 910011
	sulfur	Microthiol Special W ^{1,2,Y,Z} 80% Elf Atochem	5-6 lb/A	CAUTION , 0 ^c , 14 d interval, see label
	sulfur ele- mental + cop- per metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{5,U,W-Y} 58.4% Stoller	2 qt/A	CAUTION , 0 ^c , 7- 10 d interval, see label

D. Greenhouse Treatments (see also ALL VEGETABLES, pages 2-3)

Botrytis gray mold rot (<i>Botrytis cinerea</i>)	dicloran	Botran 75W ² 75% Gowan	2.66 lb/100 gal/A	CAUTION , 14 ^c , 7 d following transplant, repeat after half mature, see label
		Botran 6 D ² 6% Wilbur-Ellis	30 lb/A	CAUTION , 14 ^c , 7 d following transplant, repeat after half mature, see label

MUSHROOMS [*Agaricus*] (see also ALL VEGETABLES, pages 1-2)

Dry bubble (<i>Verti- cillium fungico- la</i>), wet bubble (<i>Mycogone pernici- osa</i>), cobweb (<i>Dac- tylium dendroi- des</i>), green mold (<i>Trichoderma</i>)	thiabendazole	Mertect 340-F WDS 42.28% Merck	8 oz/1000 sq ft, repeat at 4 oz/1000 sq ft	CAUTION , 0.5 (12 hr) ^c , 4 ^d , 20 oz/1000 sq ft ^d , see label
Verticillium spot (dry bubble)	benomyl	Benlate WP 50% Du Pont	1 lb/100 gal, use 12.5 gal/ 1000 sq ft	CAUTION , 2 ^c , 4 oz/1000 sq ft ^d , see label

OKRA

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Plant parasitic nematodes	fenamiphos	Nemacur 15% G Bayer	14.7-18.4 oz/1000 ft of row	DANGER , 1 ^d , see label
------------------------------	------------	------------------------	-----------------------------------	---

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
B. Seed Treatments				
Pythium damping off ^Y , early season Phytophthora ^Z	metalaxyl	Apron 50W ^{X,Z} 50%	0.5-1 ^Y or 1 ^Z oz/100 lb	CAUTION, WARNING, see labels
		Apron F ^{X,Z} 28.35%	1.5 oz/100 lb	CAUTION, see label
		Apron 25W 25%	2 oz/100 lb	CAUTION, see label
Damping off ^X , seedling blight/disease ^Y , seed rot/decay ^Z	lindane + captan (25%+12.5%)	Isotox Seed Treater-F, Treater (F) ^{Y,Z} 37.5%	4 oz/100 lb	DANGER, hopper box, see labels
		Ellis, Loveland		
		Thiram 50WP Dyed ^{X-Z} 50%	6 oz/100 lb	CAUTION, see label
	thiram	42-S Thiram ^{X-Z} 42%	6 oz/100 lb	CAUTION, see label
		Gustafson		

ONION [green onion¹, eschalot (green)², shallot (green)³, shallot (dry bulb)¹⁰, Japanese bunching onion⁴, leek⁵, spring onion/scallion⁶, dry bulb⁷, seed⁸, type not specified⁹]

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Plant parasitic nematodes (stubby root ^W , stem and bulb ^X) ^Y , pink root ^Z	oxamyl	Vydate L ^{7,W,X} 24% Du Pont	0.75-1 gal/100-150 gal or 1.5-2 gal/20-50 gal/A	DANGER, in - furrow, 14 ^C , 3 gal ^D , see label
		dichloropropene + chloropicrin (77.9%+16.5%)	Telone C-17 ^{(3,5,9,10,Y)(9,Z)} 94.4%	see label
Damping off (<i>Pythium</i>) ^W , smut ^X , seed rot/decay ^Y , seedling blight/disease ^Z	metalaxyl	Ridomil 50W ^{1-9,W} 50%	1-2 lb/treated A	WARNING, 1 ^D , see label
		Ridomil 2E ^{1-9,W} 25.1%	2-4 pt/treated A	WARNING, 1 ^D , see label
		Maneb 80 ^{9,X} , Penncozeb ^{9,X} , Dithane M-45 ^{W-Z} , Mancozeb 80WP ^{7,X} 80%	3 lb/A	CAUTION, see labels
		Elf Atochem, Rohm and Haas, Platte		
		Maneb 75 DF ^{9,X} , Penncozeb DF ^{9,X} , Manzate 200 DF ^{7,X} , Dithane DF ^{9,W-Z} 75%	see labels	CAUTION, see labels
		Elf Atochem, Du Pont, Rohm and Haas		

Rate and Formulation may differ for a specific **Disease** as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables.
Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
 Number of days from the last application until harvest (pre-harvest interval).
 Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
ONION, continued				
		Manex F With Zinc ^{1,X} , Dithane F-45 ^{9,W-Z} 37% Griffin, Rohm and Haas	2.4 qt/A	CAUTION, see labels
Watery soft rot (<i>Sclerotinia</i>) ^X , white rot (<i>Sclero-</i> <i>tium</i>) ^Y , neckrot (<i>Botrytis</i>) ^Z	thiophanate- methyl	Topsin M 85WDG ^{9,Y} 85% Elf Atochem	0.27-0.4 lb/1000 row ft	CAUTION, in furrow, see label
		Topsin M 70W or WSB 70% ^{9,Y} Elf Atochem	0.33-0.5 lb/1000 ft row	CAUTION, in furrow, see label
	dicloran	Botran 6 D ^{9,Y} 6% Wilbur-Ellis	250-400 lb/ A or 43,560 furrow ft	CAUTION, incor- porate or in- furrow, see label
	vinclozolin	Ronilan DF ^{7,X-Z} 50% BASF	2 lb/400 (drench) or 100 (spray) gal/A banded	CAUTION, see also Field Foliar Treatments, see label

B. Seed and Set Treatments (see also ALL VEGETABLES, page 2)

Damping off ^V , seedling blight/disease ^W , seed rot/decay ^X , seed storage loss ^Y , smut ^Z	captan	Captan 75 Slurry or 75 D 75% ^{9,V,X,Z} Wilbur-Ellis	1 lb/1 lb onions	DANGER, see labels
		Captan 75 ^{9,V,X,Z} 73.3% Gustafson	1 lb/lb seed + methyl cellulose	DANGER, see label
		Captan 4000 ^{9,V-Y} 39.6% Wilbur-Ellis	1.5 pt/lb	DANGER, pellet- ing, see label
	thiram	42-S Thiram ^{9,V-X} 42% Gustafson	6 oz/10 lb onions	CAUTION, see label
	lindane + captan (25%+12.5%)	Isotox Seed Treater (F) ⁹ 37.5% Loveland	4 oz/100 lb seed	DANGER, see label

C. Field Foliar Treatments (see also ALL VEGETABLES, page 2)

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
ONION, continued				
Bacterial ice nucleation ^R , Botrytis leaf blight (blast) ^S , downy mildew ^T , leafspots ^U , neckrot (<i>Botrytis</i>) ^V , powdery mildew ^W , purple blotch ^X , watery soft rot (<i>Sclerotinia</i>) ^Y , white rot (<i>Sclerotium</i>) ^Z	fosetyl-aluminum	Aliette WDG ^{7,T} 80% <i>Rhône-Roulenc</i>	2-3 lb/20 (ground) or 10 (air) gal/A	CAUTION , 7 ^C , 7 ^D , 7-14 d interval, see labels
	vinclozolin	Ronilan DF ^{7,S,V,X-Z} 50% BASF	1.5-2 lb/20 gal	CAUTION , 18 ^C , 5 ^D , 10 lb ^D , 14 d interval, see label
	iprodione	Rovral W ^{7,S,V,X} 50% <i>Rhône-Roulenc</i>	1.5 (alone) or 1-1.5 (tank mix) lb/10 (air) or 20 gal/A (ground)	CAUTION , 7 ^C , 5 ^D , 14 d interval, see label
		Rovral 4 F ^{7,S,V,X} 41.6% <i>Rhône-Roulenc</i>	1.5 (alone) or 1-1.5 (tank mix) pt/10 (air) or 20 gal/A (ground)	CAUTION , 7 ^C , 5 ^D , 14 (along) or 7 (tank mix) d interval, see label
	dicloran	Botran 75W ^{1-9,S,Z} 75% Gowan	2.67-5.33 lb/100 gal (20-500 gal/A)	CAUTION , 1 ^D , see label
	dithiocarbamate (mancozeb, maneb)	Maneb 80 ^{1,7,S,T,V,X} , Penncozeb ^{7,S,T,V,X} , Maneb ^{1,7,S,T,V,X} , Di- thane M-45 ^{7,T,V,X,Z} , Mancozeb 80WP ^{7,S,T,V} , x 80% <i>Elf Atochem</i> , <i>Riverside/ Terra</i> , <i>Rohm and Haas</i> , <i>Platte</i>	see labels	CAUTION , 7 ^C , 7 d interval, see labels
		Maneb 75DF ^{1,7,S,T,V,X} , Penncozeb DF ^{7,S,T,V,X} , Manzate 200 DF ^{7,S,T,V,X} , Dithane DF ^{7,S,T,V,X} 75% <i>Elf</i> <i>Atochem</i> , <i>Du Pont</i> , <i>Rohm and Haas</i>	2-3, 3 lb/A	CAUTION , 7 ^C , 7 d interval, see labels
		Manex F With Zinc ^{1,7,S,T,V,X} , Dithane F-45 ^{7,T,V,X,Z} 37% <i>Griffin</i> , <i>Rohm and Haas</i>	see labels	CAUTION , 7 ^C , 7 d interval, see labels
	metalaxyl + mancozeb (10%+48%)	Ridomil MZ 58 WP ^{7,10,T} 58% <i>Ciba</i>	1.5-2 lb/A + spreader sticker	WARNING , 7 ^C , 4 ^D , 14 d interval, see label
	(8%+64%)	Ridomil MZ 72 WP ^{7,10,T} 72% <i>Ciba</i>	2-2.5 lb/A + spreader sticker	CAUTION , 7 ^C , 4 ^D , 14 d interval, see label

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

ONION, continued

	chlorothaloni	Terranil 90DF ^(1,3,5,8,10,S,T,X) (7,S,V,X) or 90 DF WSP ^(1,3,5,8,10,S,T,X) (7,S,V,X) 90% Riverside/Terra	see labels	DANGER , see labels
		Bravo Ultrex ^{7,8,S,T,V,X} 82.5% ISK Biosciences	0.9-2.7 lb/A	DANGER , 7 ^C , 7-10 d interval, see label
		Bravo W-75 ^{7,S,T,V} 75% ISK Biosciences	1.5-3 lb/A	DANGER , 7 ^C , 7-10 d interval, not on Sweet Spanish, see label
		Terranil 6L ^(1,3,5,8,10,S,T,X) (7,S,V,X); Bravo 720 or Weather-Stik ^{1,3,5,7,8,10,S,T,X} ; Agronil 720 ^(1,3,5,8,S,T,X) (7,S,V,X) 54% Riverside/Terra, ISK Biosciences, Setre	see labels	WARNING , see labels
		Bravo 500 ^{1,3,5,7,8,10,S,T,V,X} , Chlorothaloni 4L ^(1,3,5,8,10,S,T,X) (7,S,X), Evade F ^(1,V) (3,5,8,10,T,X) (7,S,X) 40.4% ISK Biosciences, Riverside/Terra, Platte	see labels	WARNING , see labels
	metalaxyl + chlorothaloni (9%+72%)	Ridomil/Bravo 81WP ^{1,7,8,S,T,X} 81% Ciba	2 ^{S,X} or 1.5-2 ^T lb/A	DANGER , 7 ^{C,7} or 21 ^{C,1} ; 3 ^{1,D} or 4 ^{7,8,D} ; 7 or 14 ^{S,X} or 14 ^T d interval; see label
	copper (metallic equivalent)	Basic Copper 53 ^{9,T,X} , Microspense C.O.C. 53 WP ^{5,9,R,T,X} 53% Micro Flo	3-4 lb/A	WARNING, DANGER , 0 ^C , 7-10 d interval, see labels
		Kocide 101 WP ^{9,R,T,X} , Champion WP ^{9,R,T,X} , Blue Shield WP ^{9,R,T,X} or DF ^{9,R,T,X} , C-O-C-S WDG ^{9,T,X} 50% Griffin, Agtrol, Micro Flo, Platte	see labels	DANGER, CAUTION , 0 ^C , see labels
		Kocide DF ^{9,R,T,X} 40% Griffin	2 lb/A	DANGER , 0 ^C , 7-10 d interval, see label
		Kocide 606 ^{9,R,T,X} , Blue Shield 3L ^{9,T,X} , Champ Formula 2 F ^{9,R,T,X} , 3 Lb Copper F ^{9,T,X} 24.4% Griffin, Micro Flo, Agtrol, Setre	see labels	DANGER, CAUTION , 0 ^C , 7-10 d interval, see labels

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
ONION, continued				
		Kocide LF ^{9,R,T,X} , Champ F ^{9,R,T,X} , Cuproxat F ^{9,T,U} 15% Griffin, Agtrol, Micro Flo	2.67 pt/A	CAUTION , 0 ^C , see labels
	sulfur ele- mental + cop- per metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{9,T,X} 58.4% Stoller	2-3 qt/A	CAUTION , 0 ^C , 7- 10 d interval, see labels
	sulfur	Commercial D Sul- phur ^{9,S,T,W} 99.1% In- ternational Sulphur	10-30 lb/A	CAUTION , 0 ^C , see label
		Superfine W Sulphur ^{9,S,T,W} 94% Interna- tional Sulphur	5-10 lb/100 gal/A	CAUTION , 0 ^C , see label
		Microspurse W Sul- fur, Dual Spraying and D Sulfur 90% ^{9,W} Micro Flo	6 lb/A	CAUTION , 0 ^C , see label
		Thiolux DF Micro- nized; Microthiol Special 80% ^{9,W} Sandoz, Platte; Elf Atochem	3-10 lb/A	CAUTION , 0 ^C , see labels
		EM-53 L Sulphur ^{9,W} 53% International Sulphur	2-12 pt/A	CAUTION , 0 ^C , see label
		Sulfur 6L or F 6 52% ^{9,W} Micro Flo, Riverside/ Terra, Platte	1 gal/A	CAUTION , 0 ^C , see labels

PEPPER [bell¹, California Wonder², hot³, pimento⁴, sweet⁵, type not specified⁶]

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Root knot (except Javanese), sting, ring, stubby root, & stunt nematodes	oxamyl	Vydate L ⁶ 24% Du Pont	2 pt/200 gal transplant water/A	DANGER , 7 ^C , 3 gal ^D , see Field Foliar Treat- ments, see label
Crown rot (<i>Phytophthora</i> <i>capsici</i>) ² , damping off (<i>Pythium</i>) ^Y	metalaxyl	Ridomil 50W ^{Y,Z} 50% Ciba	2-4 lb/20- 50 gal/ treated A; 2 lb/ treated A side dress	WARNING , 7 ^C , 6 lb ^D , 30 d interval, see label

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

PEPPER, continued

		Ridomil 2E ^{Y,Z} 25.1% Ciba	4-8 pt/20-50 gal/ treated A; 4 pt/ treated A side dress	WARNING, 7 ^C , 12 pt ^D , 30 d interval, see label
	metalaxyl + copper metallic equivalent (10%+39.1%)	Ridomil/Copper 70WP ^{6,Y,Z} 70% Ciba	2.5 lb/A	DANGER, 7 ^C , 3 lb a.i. metalaxyl ^D , 10-14 d interval, see label
Southern blight (<i>Sclerotium rolfsii</i>)	quintozone PCNB)	PCNB WP or 75DG; Terraclor WP 75% ⁶ Amvac, Uniroyal	see labels	CAUTION, 20 lb a.i. ^D , see labels
		Terraclor F ⁶ 40% Uniroyal	4.5 pt/100 gal trans- plant solu- tion, 0.5 pt/plant; or 1.2-1.8 pt/100 gal/ A in furrow	CAUTION, 20 lb a.i. ^D , see labels

B. Seed Treatments

Damping off ^V , damping off (<i>Pyth- ium</i>) ^W , seedling blight/disease ^X , seed rot/decay ^Y , seed storage rot ^Z	captan	Captan 75 Slurry or 75 D 75% ^{6,V,Y} Wilbur-Ellis	2, 3 oz/100 lb	DANGER, see labels
		Captan 75 ^{6,V,Y} 73.3% Gustafson	2 oz/100 lb	DANGER, see label
		Captan Sprills ^{6,V,Y} 62.9% Wilbur-Ellis	2.25 oz/100 lb	DANGER, see label
		Captan 4000 ^{2,V,X-Z} 39.6% Wilbur-Ellis	2-3 oz/100 lb	DANGER, see label
		Captan 400 or 400- D ^{6,V,X-Z} 38.25% Gustafson	2-3 oz/100 lb	DANGER, see labels
		Captan 300 ^{2,V,X-Z} 29.35% Gustafson	2.33 oz/100 lb	DANGER, see label
	oxadixyl	Anchor F ^{6,W} 29.5% Gustafson	1.5 oz/100 lb	CAUTION, see label
	thiram	Thiram 50WP Dyed ^{6,V, X,Y} 50% Gustafson	8 oz/100 lb	CAUTION, see label
		42-S Thiram ^{6,V,X,Y} 42% Gustafson	8 oz/100 lb	CAUTION, see label

C. Field Foliar Treatments

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
PEPPER, continued				
Root knot (except Javanese), sting, ring, stubby root, and stunt nematodes	oxamyl	Vydate L ⁶ 24% Du Pont	2-4 pt/A	DANGER , 7 ^C , 3 gal ^D , 7-14 d interval, see Field Soil Treatments, see label
Anthracnose (ripe rot) ^R , bacterial ice nucleation ^S , bacterial spot ^T , Cercospora leaf spot (frog-eye spot) ^U , downy mildew ^V , early blight (Alternaria) ^W , late blight (Phytophthora infestans) ^X , Phytophthora blight (chili wilt Phytophthora capsici) ^Y , Pythium ^Z	metalaxyl + copper metallic equivalent (10%+39.1%)	Ridomil/Copper 70WP ^{6,Y,Z} 70% Ciba	2.5 lb/A	DANGER , 7 ^C , 4 ^D , 3 lb a.i. ^D metalaxyl, 10-14 d interval, see label
	dithiocarbamate (mancozeb, maneb)	Maneb 80 ^{6,R,U,Y} 80% Elf Atochem	1.5-2 lb/A	CAUTION , 7 ^C , 12 ^D lb, 7-10 d interval, see label
		Maneb 75DF ^{6,R,U,Y} 75% Elf Atochem	1.5-2 lb/A	CAUTION , 7 ^C , 12.8 lb ^D , 7-10 d interval, see label
		Manex F with Zinc ^{6,R,U,Y} 37% Griffin	see labels	CAUTION , 7 ^C , 7 ^D 10 d interval, see labels
	copper (metallic equivalent)	Basic Copper 53 ^{6,R,T} ^X , Microperse C.O.C. 53 WP ^{6,S,T} 53% Micro Flo	3-4 lb/A	WARNING, DANGER , 0 ^C , 7-10 or 5-10 d interval, see labels
		Kocide 101 WP ^{6,S,T} , Blue Shield WP ^{6,T} or DF ^{6,S,T} , Champion WP ^{6,S,T} , C-O-C-S WDG ^{6,R,V-X} 50% Griffin, Micro Flo, Agtrol, Platte	2-3, 2-4 lb/A	DANGER, CAUTION , 0 ^C , see labels
		Kocide DF ^{6,S,T} 40% Griffin	2-3 lb/A	DANGER , 0 ^C , 5-10 d interval, see label
		Kocide 606 ^{6,S,T} , Blue Shield 3L ^{6,T} Champ Formula 2 F ^{6,S,T} , 3 Lb Copper F ^{6,T} 24.4% Griffin, Micro Flo, Agtrol	see labels	DANGER , see labels
		Cuproxat F ^{R,T-X} , Kocide LF ^{6,T} , Champ F ^{6,S,T} 15% Micro Flo, Griffin, Agtrol	2.67-4 pt/A	CAUTION , 0 ^C , see labels
	copper metallic equivalent + sulfur (16.9%+15%)	Kocide 404S ^{6,T} 41% Griffin	2-3 qt/A	DANGER , 0 ^C , 7-14 d interval, see label

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables.

^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.

^C Number of days from the last application until harvest (pre-harvest interval).

^D Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
PEPPER, continued				
	sulfur elemental + copper metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{6,R,T,U} 58.4% <i>Stoller</i>	2 qt/A	CAUTION , 0 ^c , 7-10 d interval, see labels
	copper metallic equivalent + sulfur elemental (14.9%+15%)	Copper/Sulfur F ^{6,T} 57% <i>Micro Flo</i>	2-3 qt/A	WARNING , 0 ^c , 7-14 d interval, see label
	copper + zinc (metallic equivalents 4%+4%)	Copper-Z 4/4 F ^{6,T,U} 8% <i>Setre, Helena</i>	31-72 oz/A	DANGER , 0 ^c , 7-10 d interval, see label
Powdery mildew	sulfur	Commercial D Sulphur ⁶ 99.1% <i>International Sulphur</i>	10-25 lb/A	CAUTION , 0 ^c , 7-10 d interval, see label
		Superfine W Sulphur ⁶ 94% <i>International Sulphur</i>	6-16 lb/A	CAUTION , 0 ^c , 7-14 d interval, see label
		Microsperser W Sulfur, Dual Spraying and D Sulfur, W Sulfur 90% ⁶ <i>Micro Flo, Setre</i>	3-5, 5 lb/A	CAUTION , 0 ^c , 10-14 or 14 d interval, see labels
		Microthiol Special; Thiolut DF Micronized 80% ⁶ <i>Elf Atochem; Sandoz, Platte</i>	see labels	CAUTION , 0 ^c , see labels
		Sulfur 6L or F 6, L Sulfur Six F 52% ⁶ <i>Micro Flo, Riverside/Terra, Platte, Helena</i>	3-7, 3-4 pt/A	CAUTION , 0 ^c , 10-14 or 21 d interval, see labels

D. Greenhouse Treatments (see also ALL VEGETABLES, pages 2-3)

Bacterial ice nucleation ^x , bacterial spot ^y , damping off ^z	copper (metallic equivalent)	Microsperser C.O.C. 53 WP ^{6,x,z} 53% <i>Micro Flo</i>	4-5 lb/100 gal	DANGER , 4-7 d interval, see label
		Kocide 101 ^y 50% <i>Griffin</i>	4-6 Tbsp/gal	DANGER , 5-10 d interval, see label
		Kocide DF ^y 40% <i>Griffin</i>	2-3 Tbsp/1000 sq ft	DANGER , 0 ^c , 5-10 d interval, see label
	streptomycin sulfate	Agri-mycin 17 WP ⁶ 21.2% <i>Merck</i>	200 ppm (1 lb/100 gal)	CAUTION , 4-5 d interval until transplanted in field, see label

PEPPER, continued

POTATO, [Irish¹, white², type not specified³]

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Plant parasitic nematodes ^y , Verticillium wilt (<i>Verticillium dahliae</i>) ^z	ethoprop	Mocap EC 69.6% ^y	2 qt (row)	DANGER , see label
		<i>Rhône-Roulenc</i>	or 1-2 gal (broadcast) /A	
		Mocap 10% G ^y	30 (row) or 60-120 (broadcast) lb/A	WARNING , see label
	dichloropropene + chloropicrin (77.9%+16.5%)	Telone	see label	DANGER , see label
		C-17 ^{(3,Y)(2,Y,Z)} 94.4% <i>DowElanco</i>		
	dichloropropene	Telone II ^{3,Y,Z} 94% <i>DowElanco</i>	see label	WARNING , see label
	metam-sodium (sodium N-methylthiocarbamate)	Metam Sodium, Soil-Prep 42 42% ^{3,Y,Z} <i>Amvac, Wilbur-Ellis</i>	see labels	DANGER , see labels
		Metam Sodium ^{3,Y,Z} 33% <i>Amvac, Platte</i>	40-100 gal/A	
Root knot (except Javanese) sting, lesion, ring nematodes	oxamyl	Vydate L ³ 24% <i>Du Pont</i>	1-2 gal in-furrow or 2-4 gal broadcast-incorporate /20 gal/A	DANGER , 7 ^c , 4.5 gal ^d , see Field Foliar Treatments , see label

B. Seed Piece Treatments (see also ALL VEGETABLES, page 2)

Black leg ^v , <i>Rhizoctonia</i> ^w , damping off ^x , <i>Fusarium</i> seed piece decay ^y , seedborne common scab ^z	dithiocarbamate (mancozeb, maneb)	Maneb 80 DF ^{3,Y} , Penncozeb WP ^{3,Y} , Dithane M-45 ^{3,Y,Z} , Mancozeb 80WP ^{3,Y,Z} 80% <i>Elf Atochem, Rohm and Haas, Platte</i>	see labels	CAUTION , see labels
		Penncozeb DF ^{3,Y} , Maneb 75 DF ^{3,Y} , Manzate 200 DF ^{3,Y,Z} , Dithane DF ^{3,Y,Z} 75% <i>Elf Atochem, Du Pont, Rohm and Haas</i>	see labels	
		Manex F With Zinc ^{3,Y} , Dithane F-45 ^{3,Y,Z} 37% <i>Griffin, Rohm and Haas</i>	see labels	CAUTION , see labels

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (x,y,z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

POTATO, continued

		Potato Seed Treater PS ^{3,Y} 8% Platte	1 lb/100 lb	CAUTION, see label
		Mancozeb ^{3,Y} 6% Wilbur-Ellis	1 lb/100 lb	CAUTION, see label
	dithiocarbamate (maneb) + streptomycin sulfate (8%+0.01%)	Dustret A With Bark, Dustret LD 8.01% ^{3,V,W,Y} Agsco	1 lb/100 lb	CAUTION, see label
	captan	Captan 10 D ^{3,X} 10% Wilbur-Ellis	12 oz/100 lb	DANGER, see label
		Captan 7.5 D ^{3,Y} 7.5% Platte	10-16 oz/100 lb	DANGER, see label
		Captan D ^{3,X} or 5% Potato Seed Treater ^{3,X,Y} 5% Wilbur-Ellis, Platte	1.5 lb/100 lb, 1-2 lb/bu	DANGER, see labels
Seedpiece decay (Fusarium and Rhizoctonia)	thiophanate-methyl	Tops 5 ³ 5% Gustafson, Platte	8 oz/100 lb	CAUTION, see label
		Tops-2.5D, Tops 2.5D, Dustret T 2.5% ³ Gustafson, Platte, Agsco	1 lb/100 lb	CAUTION, see label
Fusarium dry rot (tuber rot, seed piece decay)	thiabendazole	Mertect 340-F WDS ³ 42.28% Merck	0.42 oz/2000 lb tubers	CAUTION, 2 ^D ; entering storage, before shipping and cutting; see label
		1/2% Thiabendazole, TBZ 0.5% ³ Platte	1 lb/100 lb	CAUTION, use only on 'Russet Burbank' cut seed, see label
Soft rot, blackleg	streptomycin sulfate	Agri-mycin 17 WP ³ 21.2% Merck	100 ppm (0.5 lb/100 gal)	CAUTION, also apply fungicide, see label

C. Field Foliar Treatments (see also ALL VEGETABLES, page 2)

Root knot (except Javanese) sting, lesion, ring nematodes	oxamyl	Vydate L ³ 24% Du Pont	2-4 pt/4 gal (air)/A	DANGER, 7 ^C , 4.5 gal ^D , 5-7 d interval, see Field Soil Treatments, see label
---	--------	--------------------------------------	----------------------	--

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
POTATO, continued				
Bacterial ice nucleation ^R , Botrytis vine rot ^S , early blight ^T , late blight and tuber rot (<i>Phytophthora infestans</i>) ^U , pink rot (<i>Phytophthora ethroseptica</i>) ^V , powdery mildew ^W , Pythium leak ^X , tuber rot (field) and storage rot (<i>Phytophthora</i> and <i>Pythium</i>) ^Y , white mold ^Z	chlorothalonil	Terranil 90DF or 90DF WSP 90% ^{3,S-U} <i>Riverside/Terra</i>	see labels 0.7-1.4 lb/A	DANGER , 7-10 d interval, see labels
		Bravo Ultrex ^{3,S-U} 82.5% <i>ISK Biosciences</i>	1-1.5 lb/A	DANGER , 7-10 d interval, see label
		Bravo W-75 ^{3,S-U} 75% <i>ISK Biosciences</i>	see labels	DANGER , 7-10 d interval, see label
		Terranil 6L, Bravo 720 or Weather Stik, Agronil 720 54% ^{3,S-U} <i>Riverside/Terra, ISK Biosciences, Setre</i>	see labels	WARNING , 7-10 d interval, see labels
		Bravo ZN or 500 ^{3,S-U} , Chlorothalonil 4L ^{3,Q-U} , Evade F ^{3,S-U} 40.4% <i>ISK Biosciences, Riverside/Terra, Platte</i>	see labels	WARNING , 0 ^C , 7-10 d interval, see labels
	sulfur + chlorothalonil (27%+19%)	Bravo S F ^{3,S-U,W} 46% <i>ISK Biosciences, Setre, Helena</i>	see labels	CAUTION , 0 ^C , 7-10 ^{S-U} or 21 ^W d interval, see labels
	metalaxyl + chlorothalonil (9%+72%)	Ridomil/Bravo 81WP ³ 81% <i>Ciba</i>	2 ^Y or 1.5-2 ^{S-U} lb/A	DANGER , 7 ^C , 4 ^D ; 14 ^{U,Y} or 7 or 14 ^{S,T} d interval; see label
	metalaxyl + mancozeb (10%+48%)	Ridomil MZ 58 WP ³ 58% <i>Ciba</i>	[2 lb + 0.6 lb a.i. mancozeb] ^{T,U} /A, 2 ^{U,V,X} lb/5 gal (air)/A alternate with protective fungicide	WARNING , 14 ^C , 3 ^D , 14 d interval, see label
	(8%+64%)	Ridomil MZ 72 WP ^{3,T-V,X} 72% <i>Ciba</i>	2.5 lb/A	CAUTION , 14 ^C , 3 ^D , 14 d interval, see label
	metalaxyl + copper metallic equivalent (10%+39.1%)	Ridomil/Copper 70WP ³ 70% <i>Ciba</i>	2-2.5 ^{U,V} or 1.5-2.5 ^U lb/A	DANGER , 7 ^C , 4 ^D , 14 d interval, see label

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
POTATO, continued				
	dithiocarbamate (mancozeb, maneb)	Maneb 80 WP, Penncozeb, Dithane M-45, Mancozeb 80WP, Polyram 80DF 80% ^{3,T,U} ^U Elf Atochem, Rohm and Haas, Platte	see labels	CAUTION , 14 ^C , 14 lb ^D , 5-10 d interval, see labels
		Penncozeb DF, Maneb 80, Dithane DF, Manzate 200 DF 75% ^{3,T,U} Elf Atochem, Rohm and Haas, Du Pont	1.5-2, 1-2 lb/A	CAUTION , 14 ^C , 5-10 d interval, see labels
		Manex F With Zinc, Dithane F-45 37% ^{3,T,U} Griffin, Rohm and Haas	see labels	CAUTION , 14 ^C , 11.2 qt ^D , 5-10 d interval, see labels
	triphenyltin hydroxide	Super Tin ^{3,T,U} 80WP 80% Griffin	see label	DANGER , 21 ^C , 15 oz ^D , 7 d interval, see label
	copper (metallic equivalent)	Microspense C.O.C. 53 WP ^{3,R,T,U} , Basic Copper 53 ^{3,T,U} 53% Micro Flo	3-6, 3-4 lb/A	WARNING, DANGER , 4-10 or 7-10 d interval, see labels
		Blue Shield WP ^{3,R,T,U} or DF ^{3,R,T,U} , Kocide 101 ^{3,R,T,U} , Champion WP ^{3,R,T,U} , C-O-C-S WDG ^{3,T,U} 50% Micro Flo, Griffin, Agtrol, Platte	1-4 lb/A	DANGER, CAUTION , see labels
		Kocide DF ^{3,R,T,U} 40% Griffin	1-4 lb/A	DANGER , 14 ^C , 7-10 d interval, see label
		Kocide 606 ^{3,R,T,U} , Blue Shield 3L ^{3,T,U} , Champ Formula 2 F ^{3,R,T,U} , 3 Lb Copper F ^{3,T,U} 24.4% Griffin, Micro Flo, Agtrol, Setre	see labels	DANGER, CAUTION , 14 ^C , 7-10 d interval, see labels
		Kocide LF ^{3,T,U} , Champ F ^{3,R,T,U} , Cuproxat F ^{3,T,U} 15% Griffin, Agtrol, Micro Flo	1.33-5.33 pt/A	CAUTION , see labels
	copper + zinc (metallic equivalents 4%+4%)	Copper-Z 4/4 F ^{3,T,U} 8% Setre, Helena	31-72 oz/A	DANGER , 0 ^C , 7-10 d interval, see label
	sulfur	Commercial D Sulphur ^{3,W} 99.1% International Sulphur	10-25 lb/A	CAUTION , 0 ^C , 7-10 d interval, see label

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
POTATO, continued				
		Superfine W Sulphur ^{3,W} 94% <i>International Sulphur</i>	6-16 lb/A	CAUTION, 0 ^C , 7-14 d interval, see label
		Microspurse W Sulphur, W Sulfur 90% ^{3,W} <i>Micro Flo, Setre</i>	3-5, 5 lb/A	CAUTION, 0 ^C , 10-14 d interval, see label
		Sprayable Sulfur ^{3,W} 81.25% <i>Platte</i>	3-4 lb/8 (air) or 10 (ground) gal/A	CAUTION, 0 ^C , 21 d interval, see label
		Microthiol Special; Thiolum DF Micronized 80% ^{3,W} <i>Elf Atochem; Sandoz, Platte</i>	see labels	CAUTION, 0 ^C , see labels
		EM-53 L Sulphur ^{3,W} 53% <i>International Sulphur</i>	2-7 pt/A	CAUTION, 0 ^C , see label
		Sulfur 6L or F 6, L Sulfur Six, That F Sulfur 52% ^{3,W} <i>Micro Flo, Riverside/Terra, Platte, Helena, Stoller</i>	see labels	CAUTION, 0 ^C , see labels
	sulfur elemental + copper metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{3,T,U} 58.4% <i>Stoller</i>	2-3 qt/A	CAUTION, 0 ^C , 7-10 d interval, see labels
	iprodione	Rovral ^{3,T,Z} 50% <i>Rhône-Roulenc</i>	1-2 ^T or 2 ^Z lb/10 gal/A	CAUTION, 14 ^C , 4 ^D , 10-14 ^T or 14-28 ^Z d inter-val, see label
		Rovral 4 ^{3,T,Z} F 41.6% <i>Rhône-Roulenc</i>	1-2 ^T or 2 ^Z pt/10 gal/A	CAUTION, 14 ^C , 4 ^D , 10-14 ^T or 14-28 ^Z d inter-val, see label

D. Postharvest Treatments

Fusarium tuber rot	thiabendazole	Mertect 340-F WDS 42.28% <i>Merck</i>	0.42 oz/2000 lb tubers	CAUTION, 2 ^D , entering storage and before shipping, see label
--------------------	---------------	--	------------------------	---

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (x,y,z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables.
^B Signal words: CAUTION for slightly toxic; WARNING for moderately toxic; DANGER for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

SPINACH

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Damping off (<i>Pythium</i>) ^x , downy mildew ^y , white rust ^z	metalaxyl	Ridomil 50W 50% <i>Ciba</i>	2-4 ^{x-z} lb/ treated A, 0.5 ^{y,z} lb/A side dress	WARNING, 21 ^c , 3 ^d , see label
		Ridomil 2E 25.1% <i>Ciba</i>	4-8 ^{x-z} pt/ treated A, 1 ^{y,z} pt/A side dress	WARNING, 21 ^c , 3 ^d , see label
		Ridomil 5G 5% <i>Ciba</i>	20-40 lb ^{x-z} /treated A, 5 ^{y,z} lb/A side dress	CAUTION, 21 ^c , 3 ^d , see label

B. Seed Treatments

Damping off ^u , damping off (<i>Pythium</i>) ^v , <i>Fusarium</i> wilt ^w , seedling blight/disease ^x , seed rot/decay ^y , seed storage loss ^z	captan	Captan 75 Slurry or 75 D 75% ^{u,y} <i>Wilbur-Ellis</i>	4, 6 oz/100 lb	DANGER, see labels
		Captan 75 ^{u,y} 73.3% <i>Gustafson</i>	4 oz/100 lb	DANGER, see label
		Captan Sprills ^{u,y} 62.9% <i>Wilbur-Ellis</i>	4.25 oz/100 lb	DANGER, see label
		Captan 4000 ^{u,x-z} 39.6% <i>Wilbur-Ellis</i>	4-6 oz/100 lb	DANGER, see label
		Captan 400 or 400- D ^{u,x-z} 38.25% <i>Gustafson</i>	4-6 oz /100 lb	DANGER, see labels
		Captan 300 ^{u,x-z} 29.35% <i>Gustafson</i>	4.75 oz/ 100 lb	DANGER, see label
thiram		Thiram 50WP Dyed ^{u,x,y} 50% <i>Gustafson</i>	8 oz/100 lb	CAUTION, see label
		42-S Thiram ^{u,x,y} 42% <i>Gustafson</i>	8 oz/100 lb	CAUTION, see label
lindane + captan (25%+12.5%)		Isotox Seed Treat- er-F or Treater (F) 37.5% ^x <i>Wilbur-Ellis</i> , <i>Loveland</i>	4 oz/100 lb	DANGER, see labels
benomyl		Benlate WP ^w 50% <i>Du</i> <i>Pont</i>	1-2 lb/0.5- 2 pt water /100 lb	CAUTION, see label
oxadixyl		Anchor F ^v 29.5% <i>Gustafson</i>	1.5 oz/100 lb	CAUTION, see label

SPINACH, continued

C. Field Foliar Treatments

Anthracnose ^U , bacterial ice nucleation ^V , black leaf spot (<i>Alternaria</i>) ^W , <i>Cercospora</i> leaf spot ^X , downy mildew (blue mold) ^Y , white rust ^Z	metalaxyl + copper metallic equivalent (10%+39.1%)	Ridomil/Copper 70WP ^{Y,Z} 70% Ciba	2.5 lb/A	DANGER , 21 ^C , 14 d interval, see label
	copper (metallic equivalent)	Basic Copper 53 ^{U,X-Z} 53% <i>Micro Flo</i>	2-4 lb/A	WARNING , 0 ^C , 7-10 d interval, see labels
		Kocide 101 WP ^{U-Z} , Champion WP ^{U,X-Z} , Blue Shield DF ^{U,V,X-Z} , C-O-C-S WDG ^{W-Y} 50% <i>Griffin</i> , <i>Agtrol</i> , <i>Micro Flo</i> , <i>Platte</i>	see labels	DANGER , CAUTION , 0 ^C , see labels
		Kocide DF ^{U,V,X-Z} 40% <i>Griffin</i>	2-3 lb/A	DANGER , 0 ^C , 7-10 d interval, see label
		Champ Formula 2 F ^{U,V,X-Z} , Blue Shield 3L ^{U,X-Z} , 3 Lb Copper F ^{U,X-Z} 24.4% <i>Agtrol</i> , <i>Micro Flo</i> , <i>Setre</i>	1.33-2.67 pt/A	CAUTION , DANGER , 0 ^C , 7-10 d interval, see label
		Kocide LF ^Y , Champ F ^{U,V,X-Z} 15% <i>Griffin</i> , <i>Agtrol</i>	see labels	CAUTION , 0 ^C , 7-10 d interval, see label
	sulfur elemental + copper metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{X-Z} 58.4% <i>Stoller</i>	2-4 qt/A	CAUTION , 0 ^C , 7-10 d interval, see label
	fosetyl -aluminum	Aliette WDG ^Y 80% <i>Rhône-Roulenc</i>	2-5 lb/15 gal/A	AUTION , 3 ^C , 7 ^D , 7-21 d interval, see labels

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (^{X,Y,Z}, etc.). Number superscripts (^{1,2,3}, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

SWEETPOTATO

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Root knot (except Javanese) and spiral nematodes	oxamyl	Vydate L 24% Du Pont	2-3 gal (broadcast/ band, in- corporate)/ 20 gal/A treated or 1-2 gal in- furrow (transplant water)/200 gal/A	DANGER , 3 gal ^D , see label
Plant parasitic nematodes ^y , soil rot (soil pox) ^z	ethoprop	Mocap EC ^y 69.6% Rhône-Roulenc	2-2.67 qt (row) or 1- 1.33 gal (broadcast) /A	DANGER , see label
		Mocap 10% ^y G Rhône-Roulenc	30-40 (row) or 60-80 (broadcast) lb/A	WARNING , see label
Pythium and Phythophthora	aldicarb	Temik 15G ^y 15% Rhône-Roulenc	10-20 lb/A, 15-30 oz/ 1000 ft row	DANGER , at plant, 120 ^c , 1 ^D and 20 lb ^D , see label
		dichloropro- pene + chloropicrin (77.9%+16.5%)	Telone C-17 ^{y,z} 94.4% DowElanco	see label
Pythium and Phythophthora	metalaxyl	Ridomil 50W 50% Ciba	2-4 lb/ treated A	WARNING , 1 ^D , see label
		Ridomil 2E 25.1% Ciba	4-8 pt/ treated A	WARNING , 1 ^D , see label

B. Plant Bed and "Seed Roots" Treatments (see also ALL VEGETABLES, page 2)

Black rot, scurf, foot rot	thiabendazole	Mertect 340-F WDS 42.28% Merck	8 oz/7.5 gal, dip seed roots 1-2 min and plant	CAUTION , see label
Sclerotial blight (<i>Sclerotium rolfsii</i>), scurf (<i>Monilochaetes infuscans</i>)	dicloran	Sweetpotato Fungicide W 75% Gowan	1 lb/7.5 gal, seed potato dip 10-15 sec; or 3-3.75 lb/14 gal/ 1000 sq ft plant bed	CAUTION , see label

SWEETPOTATO, continued

C. Postharvest Treatments

Postharvest decay (Rhizopus rot)	dicloran	Sweetpotato Fungicide W 75% Gowan	1 lb/100 gal spray or dip	CAUTION , see label
-------------------------------------	----------	---	---------------------------------	-------------------------------

TOMATO

A. Field Soil Treatments (see also ALL VEGETABLES, pages 1-2)

Damping off (<i>Pythium</i>) ^y , root and fruit rot (<i>Phytophthora</i> , <i>Pythium</i>) ^z	metalaxyl	Ridomil 50W 50% Ciba	2-4 lb ^y / treated A; 2 ^z lb/ treated A side dress	WARNING , 7 ^c , 3 ^d , 6 lb ^d , see label
		Ridomil 2E 25.1% Ciba	4-8 ^y pt/ treated A; 4 ^z pt/ treated A side dress	WARNING , 28 ^c , 3 ^d , 12 pt ^d , see label
		Ridomil 5G 5% Ciba	20 lb/A, 10 lb/A side dress	WARNING , 7 ^c , 40 lb ^d , see label
Southern blight (<i>Sclerotium</i> <i>rolfsii</i>)	quintozene (PCNB)	Terraclor 75 WP; PCNB 75WP or 75DG 75% <i>Uniroyal</i> ; <i>Amvac</i>	see labels	CAUTION ; 7, 7.5 or 16.5 lb a.i. ^d ; see labels
		Terraclor F 40% <i>Uniroyal</i>	4.5 pt/100 gal trans- plant solu- tion, 0.5 pt/plant; or 1.2-1.8 pt/100 gal/ A in furrow	CAUTION ; 7, 7.2 or 16.5 lb a.i. ^d ; see label

B. Seed Treatments (see also ALL VEGETABLES, page 2)

Damping off ^v , damping off (<i>Pythium</i>) ^w , seedling blight/disease ^x , seed rot/decay ^y , storage loss ^z	captan	Captan 300 ^{v,x,z} 29.35% <i>Gustafson</i>	2.33 oz/ 100 lb	DANGER , see label
		thiram	Thiram 50WP Dyed ^{v,x} , ^y 50% <i>Gustafson</i>	6 oz/100 lb
		42-S Thiram ^{v,x,y} 42% <i>Gustafson</i>	6 oz/100 lb	CAUTION , see label
	dithiocarbam- ate (manco- zeb, maneb)	Dithane M-45 ^{v,x} 80% <i>Rohm and Haas</i>	8 oz/100 lb	CAUTION , see label
		Manzate 200 DF, Dithane DF ^{v,x,y} 75% <i>Du Pont</i>	8 oz/100 lb + dye	CAUTION , see label

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (x,y,z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
TOMATO, continued				
		Dithane F-45 ^{V,X} 37% <i>Rohm and Haas</i>	12.8 oz/100 lb	CAUTION , see labels
	oxadixyl	Anchor F ^W 29.5% <i>Gustafson</i>	1.5 oz/100 lb	CAUTION , see label
C. Field Foliar Treatments (see also ALL VEGETABLES, page 2)				
Plant parasitic nematodes	oxamyl	Vydate L 24% <i>Du Pont</i>	2-4 pt/100 gal/A	DANGER , 1 ^C , 6 gal ^D , 7-14 d interval, see label
Anthracnose ^G , bacterial canker ^H , bacterial ice nucleation ^I , bacterial speck ^J , bacterial spot ^K , buckeye rot (<i>Phytophthora</i>) ^L , <i>Cercospora</i> leafspot ^M , downy mildew ^N , early blight (nail head rust) ^O , fruit rot and black mold (<i>Alternaria</i>) ^P , gray leaf mold (<i>Fulvia/Cladosporium</i>) ^Q , gray leaf spot (<i>Stemphylium</i>) ^R , gray mold and ghost spot (<i>Botrytis</i>) ^S , late blight and fruit rot (<i>Phytophthora</i>) ^T , leaf spot (<i>Phoma</i>) ^U , powdery mildew ^V , <i>Rhizoctonia</i> fruit rot ^W , <i>Septoria</i> leaf spot ^X , target spot (<i>Corynespora</i>) ^Y , white mold (<i>Sclerotinia</i>) ^Z	dithiocarbamate (mancozeb, maneb)	Maneb 80, Penncozeb, Maneb Fungicide, Mancozeb Fungicide or 80WP, Dithane M-45 80% ^{G,O,Q,R,T,X} <i>Elf Atochem, Riverside/Terra, Platte, Rohm and Haas</i>	1.5-2 lb/A	CAUTION , 5 ^C , 8 lb ^D , 7-10 d interval, see labels
		Maneb 75DF, Penncozeb DF, Dithane DF, Manzate 200 DF 75% ^{G,O,Q,R,T,X} <i>Elf Atochem, Rohm and Haas, Du Pont</i>	1.5-2 lb/A	CAUTION , 5 ^C , 8 or 8.5 lb ^D , 7-10 d interval, see labels
		Manex F With Zinc, Dithane F-45 37% ^{G,O,Q,R,T,X} <i>Griffin, Rohm and Haas</i>	1.2-1.6 qt/A	CAUTION , 5 ^C , 6.4 qt ^D , 7-10 d interval, see labels
	metalaxyl + mancozeb (10%+48%)	Ridomil MZ 58 WP ^T 58% <i>Ciba</i>	[2 lb + 0.6 lb a.i. mancozeb]/5 gal (air)/A	WARNING , 5 ^C , 3 ^D , 14 d interval, see label
	(8%+64%)	Ridomil MZ 72 WP ^T 72% <i>Ciba</i>	2.5 gal/5 gal (air)/A	CAUTION , 5 ^C , 3 ^D , 14 d interval, alternate with protectant fungicide, see label
	chlorothaloni	Terranil 90DF or 90 DF WSP 90% ^{G,O,P-T,W,X} <i>Riverside/Terra</i>	see labels	DANGER , 0 ^C , see labels
		Bravo Ultrex ^{G,O,P-T,W-Y} 82.5% <i>ISK Biosciences</i>	1.3-2.75 lb/A	DANGER , 0 ^C , see label
		Bravo W-75 ^{G,O,R-T,W} 75% <i>ISK Biosciences</i>	see label	DANGER , see label
		Terranil 6L, Bravo 720 or Weather Stik, Agronil 720 54% ^{G,O,P-T,W-Y} <i>Riverside/Terra, ISK Biosciences, Setre</i>	see labels	WARNING , 0 ^C , see labels

TOMATO, continued

		Bravo 500, Chlorothalonil 40.4%; Evade F 40.4% ^{G,O,P-T,W-Y} ISK Biosciences, River- side/Terra, Platte	see labels	WARNING , see labels
	chlorothalo- nil + copper oxychloride + maneb (27%+ 45.8%+5.4%)	Bravo C/M ^{G,J,K,O-T,W-Y} 78.2% ISK Biosciences	4-6 lb/50- 125 gal/A	DANGER , 5 ^C , 6 ^D , 7 d interval, see label
	metalaxyl + chlorothalo- nil (9%+72%)	Ridomil/Bravo 81WP ^{G,O,P-T,W,X} 81% Ciba	1.5-2 ^T , 2 ^{O,Q,R,X} or 2- 3 ^{G,P,S,W} lb/A	DANGER , 7 ^C , 4 ^D , 14 ^{O,Q,R,T,X} or 10- 14 ^{G,P,S,W} d interval, see label
	sulfur + chlorothalo- nil (27%+19%)	Bravo S F ^{G,O,Q-T,W,X} 46% ISK Bioscienc-es, Setre, Helena	4.5-8.5 pt/A	CAUTION , 0 ^C , 7- 10 d interval, see labels
	copper (metallic equivalent)	Basic Copper 53 ^{G,H,J,K,O,Q,R,T,X} , Microspere C.O.C. 53 WP ^{G,I-K,O,Q,T,X,Y} 53% Micro Flo	2-4, 3-4 lb/A	WARNING, DANGER , 0 ^C , see labels
		Blue Shield WP ^{I-K,O} or DF ^{G,I-K,O,R} , Kocide 101 WP ^{G,I-K,O,Q,T,X} , Champion WP ^{G,I-K,O,S,X} , C-O-C-S WDG ^{K,O,T,X} 50% Micro Flo, Griffin, Agtrol, Platte	see labels	DANGER, CAUTION , 0 ^C , see labels
		Kocide DF ^{G,I-K,O,Q,T,X} 40% Griffin	see label	DANGER , 0 ^C , see label
		Kocide 606 ^{G,I-K,O,Q,T,X} , Blue Shield 3L ^G . J,K,O,Q,X, Champ Formula 2 F ^{G,I-K,O,Q,X} , 3 Lb Copper F ^{G,J,K,O,Q,X} 24.4% Griffin, Micro Flo, Agtrol, Setre	see labels	DANGER, CAUTION , 0 ^C , see labels
		Kocide LF ^{G,J,K,O,Q,T,X} , Champ F ^{G,I-K,O,Q,X} , Cuproxat F ^{G,J,K,O,T} 15% Griffin, Agtrol, Micro Flo	see labels	CAUTION , 0 ^C , see labels

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (x,y,z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

Disease ^A	Ingredient	Formulation ^A	Rate ^A	Remarks ^{A,B}
TOMATO, continued	metalaxyl + copper + metallic equivalent (10%+39.1%)	Ridomil/Copper 70WP ^{J,L,T} 70% <i>Ciba</i>	1.5-2.5 lb/A	DANGER , 7 ^C , 3 lb a.i. metalaxyl ^D , see label
	copper metallic equivalent + sulfur (16.9%+15%)	Kocide 404S ^{K,O} 41% <i>Griffin</i>	2-3 ^O or 2-4 ^K qt/A	DANGER , 7-10 d interval, see label
	sulfur elemental + copper metallic equivalent (50%+4.4%)	Top Cop With Sulfur F ^{G,J,K,N,O,T,V} 58.4% <i>Stoller</i>	2-3 qt/A	CAUTION , 0 ^C , 5-10 d interval, see labels
	copper metallic equivalent + sulfur elemental (14.9%+15.5%)	Copper/Sulfur F ^{K,O} 57% <i>Micro Flo</i>	2-3 ^O or 2-4 ^K qt/A	WARNING , 0 ^C , 7-10 d interval, see label
	copper + zinc (metallic equivalents 4%+4%)	Copper-Z 4/4 F ^{K,O} 8% <i>Setre, Helena</i>	31-72 oz/A	DANGER , 0 ^C , 4-5 (seed bed) or 7 (field) d interval, see label
	benomyl	Benlate WP ^{M,Q,S,U,Y,Z} 50% <i>Du Pont</i>	8-16 oz/50 gal (ground) or 5 gal (air) /A	CAUTION , 1 ^C , 5 lb ^D , 7-14 d interval, see label
	sulfur	Microthiol Special; Thiolut DF Micronized 80% ^V <i>Elf Atochem; Sandoz, Platte</i>	see labels	CAUTION , 0 ^C , see labels

D. Greenhouse Treatments (see also ALL VEGETABLES, pages 2-3)

Anthracnose ^P , bacterial ice nucleation ^Q , bacterial speck ^R , bacterial spot ^S , damping off ^T , early blight ^U , gray leaf mold (<i>Fulvia, Cladosporium</i>) ^V , gray leaf spot (<i>Stemphylium</i>) ^W , late blight ^X , Septoria leaf spot ^Y , stem canker (<i>Botrytis</i>) ^Z	dithiocarbamate (mancozeb, maneb)	Maneb 80 ^{P,U-Y} 80% <i>Elf Atochem</i>	1.5-2 lb/A	CAUTION , 5 ^C , 8 lb ^D , 7-10 d interval, see label
		Maneb 75 DF ^{P,U-Y} 75% <i>Elf Atochem</i>	1.5-2 lb/A	CAUTION , 5 ^C , 8.5 lb ^D , 7-10 d interval, see label
		Manex F With Zinc ^{P,U-Y} 37% <i>Griffin</i>	1.2-1.6 qt/A	CAUTION , 5 ^C , 6.4 qt ^D , 7-10 d interval, see label
	copper (metallic equivalent)	Microspense C.O.C. 53 WP ^{Q,T} 53% <i>Micro Flo</i>	4-5 lb/100 gal	DANGER , 0 ^C , 4-7 d interval, see label
		Kocide 101 WP ^{P,R,S,U,V,X,Y} 50% <i>Griffin</i>	see label	DANGER , 0 ^C , see label

Disease^A Ingredient Formulation^A Rate^A Remarks^{A,B}

TOMATO, continued

		Kocide DF ^{P,R,S,U,V,X,Y} 40% Griffin	see label	DANGER , 0 ^C , see label
	dicloran	Botran 75W ^Z 75% Gowan	1 lb/100 gal (500 gal/A max.)	CAUTION , 10 ^C , 4 ^D , 7 d inter-val, see label
		Botran 6 D ^Z 6% Wilbur-Ellis	30 lb/A	CAUTION , 7 d interval, see label
	streptomycin sulfate	Agri-mycin 17 WP ^S 21.2% Merck	200 ppm (1 lb/100 gal)	CAUTION , 4-5 d interval until transplanted, see label

^A Rate and Formulation may differ for a specific Disease as shown by a superscript code from the end of the alphabet (X,Y,Z, etc.). Number superscripts (1,2,3, etc.) refer to specific vegetables.
^B Signal words: **CAUTION** for slightly toxic; **WARNING** for moderately toxic; **DANGER** for highly toxic.
^C Number of days from the last application until harvest (pre-harvest interval).
^D Maximum number of applications or maximum product (units specified) per acre per season.

APPROXIMATE EQUIVALENT RATES OF FUNGICIDES FOR MIXING 1 GALLON OF SPRAY SOLUTION

Rate specified on label (pounds, ounces, or pints per 100 gallons water)

<u>Material</u>	<u>Wettable Powders</u> (rate/100 gal)				
	0.25 lb	0.5 lb	1.0 lb	1.5 lb	2.0 lb
Benlate 50%	0.25 Tbsp	0.5 Tbsp	1 Tbsp	1.5 Tbsp	2 Tbsp
Champion 77% WP	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
Maneb 80% WP	0.5 tsp	1 tsp	2 tsp	3 tsp	4 tsp
Manzate 200 DF 75% DF	0.37 tsp	0.75 tsp	1.5 tsp	2.25 tsp	3 tsp
Terraclor 75% WP	0.37 tsp	0.75 tsp	1.5 tsp	2.25 tsp	3 tsp

<u>Material</u>	<u>Liquid or Flowable</u> (rate/100 gal)				
	4 oz	8 oz	1.0 pt	1.5 pt	2.0 pt
Bravo 720 54%F	0.25 tsp	0.5 tsp	1 tsp	1.5 tsp	2 tsp
Champ Formula 2 37.5% F	0.25 tsp	0.5 tsp	1 tsp	1.5 tsp	2 tsp
Kocide 606 37.5% F	0.25 tsp	0.5 tsp	1 tsp	1.5 tsp	2 tsp

**MANUFACTURERS AND DISTRIBUTERS OF DISEASE CONTROL
PRODUCTS FOR COMMERCIAL VEGETABLES IN TEXAS**

Agasco, Inc.
P.O. Box 13458
Grand Forks, ND 58208-3458
Ph. (701) 775-9587
(800) 859-3047

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

American Cyanamid Co.
Agric. Products Division
One Cyanamid Plaza
Wayne, NJ 07470
Ph. (201) 831-2000
(201) 835-3100

Amvac Chemical Corp
4100 East Washington Blvd.
Los Angeles, CA 90023-4496
Ph. (213) 264-3910
(601) 825-0711

BASF Corp.
Agricultural Products Group
P.O. Box 13528
Res. Tri. Pk, NC 27709-3528
Ph. (800) 875-0081
(800) 424-9300

Bayer Agriculture Division
13900 E. Harvard Ave.
Suite 109
Aurora, ID 80014-2325
Ph. (303) 695 4884
(913) 897-9106

Buckman Laboratories, Inc.
1256 N. McLean Blvd.
Memphis, TN 38108
Ph. (800) 282-5626
(901) 278-0330

Ciba Crop Protection
P.O. Box 18300
410 Swing Rd.
Greensboro, NC 27419-8300
Ph. (800) 888-8372
(800) 334-9481

DowElanco
U.S. Crop Production
9330 Zionsville Rd.
Indianapolis, IN 46268-1054
Ph. (800) 258-3033
(800) 424-9300

Du Pont Agric. Products
P.O. Box 80038
Walkers Mill
Barley Mill Plaza
Wilmington, DE 19880-0038
Ph. (800) 432-7671
(800) 441-3637

Elf Atochem N. Amer. Inc.
Agrichemicals Division
2000 Market St., 21st Floor
Philadelphia, PA 19103-3222
Ph. (215) 419-7770
(409) 779-0060

Gowan Company
1644 Engler Ave.
P.O. Box 5569
Yuma, AZ 85366-5569
Ph. (520) 783-8844
(800) 424-9300

Great Lakes Chemical Co.
P.O. Box 2200
W. Lafayette, IN 47906-200
Ph. (317) 497-6100

Griffin Corp.
Ag. Chem. Gp.
Rocky Ford Rd.
P.O. Box 1847
Valdosta, GA 31603-1847
Ph. (912) 242-8635
(800) 424-9300

Gustafson, Inc.
P.O. Box 660065
Dallas, TX 75266-0065
Ph. (214) 985-8877

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

ISK Biosciences Corp.
5966 Heisley Rd.
P. O. Box 8000
Mento, OH 44061-8000
Ph. (216) 357-4100
(216) 357-7070

Kemira Biotech
AgBio Development Inc.
9915 Raleigh St.
Westminster, CO 80030
Ph. (303) 469-9221
(800) 424-9300

Loveland Industries, Inc.
P. O. Box 1289
Greeley, CO 80632-1289
Ph. (303) 356-8920
(800) 424-9300
see also United Agri
Products

Merck Agvet Div.
P.O. Box 2000
Rahway, NJ 07065-0912
Ph. (210) 620-6333
(800) 672-6372

Micro Flo Company
P.O. Box 5948
Lakeland, FL 33807-5948
Ph. (941) 647-3608

Platte Chemical Co.
150 So. Main St.
Fremont, NE 68025-5697
Ph. (303) 356-4400
see also United Agri
Products

Rhône-Poulenc Ag. Co.
Comm. Dept., P.O. Box 12014
2 T.W. Alexandria Dr.
Res. Tri. Pk, NC 27709
Ph. (919) 549-2346
(800) 334-7577

Riverside/Terra
see Terra International

Rohm & Haas Co.
100 Independence Mall West
Philadelphia, PA 19106
Ph. (215) 592-3000
(800) 424-9300

Sandoz Agro, Inc.
1300 East Touhy Avenue
Des Plaines, IL 60018
Ph. (708) 699-1616

Setre Chemical Co.
6075 Poplar Ave. Suite 500
Memphis, TN 38119
Ph. (901) 761-0050
(800) 424-9300

Stoller Enterprises, Inc.
8580 Katy Freeway, Ste. 100
Houston, TX 77024
Ph. (713) 461-1493

Terra International Inc.
600 4th St.
Sioux City, IA 51102-6000
Ph. (712) 7277-1340
(817) 772-7210

Uniroyal Chemical Co.
Benson Road
Middlebury, CT 06749
Ph. (203) 723-3670

United Agri Products, Inc.
P.O. Box 1286
419 18th St.
Greely, CO 80632-1286
Ph. (303) 356-4400

Wilbur-Ellis (Wilfarm LLC)
P. O. Box 16458
Fresno, CA 93755
Ph. (209) 442-1220
(512) 383-4901

Zeneca Ag Products
1800 Concord Pike
Wilmington, DE 19850-5458
Ph. (302)-886-1000
(800) 327-8633

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 your local operator.

INDEX OF VEGETABLE CROPS

All vegetables	1	Corn	14	Green	37
Artichoke (Jerusalem)	26	Popcorn	14	Japanese bunching	37
Asparagus	3	Sweet	14	Leek	37
Balsam pear (Bitter melon)	17	Sweet corn seed production	14	Seed	37
Basil	26	Cowpea	28	Shallot	37
Bean	28	Crenshaw	17	Onion, Spring (Scallion)	37
Broad (Fava)	28	Cucumber	17	Oregano	26
Bush	28	Cucurbit hybrids	17	Parsley	26
Dry	28	Cucurbits	17	Chinese/Cilantro	26
Fava (Broad)	28	Dill	26	Curly	26
Field	28	Eggplant	22	Flat leaf	26
French	28	Endive	34	Parsnip	26
Garbanzo (Chick Pea)	28	Escarole	34	Pea	28
Green	28	Eschalot	37	Black-eyed	28
Kidney	28	Fennel	26	Catjung	28
Lima	28	Gai lon	10	Chick (Garbanzo bean)	28
Mung	28	Garbanzo bean	28	Cowpea	28
Navy	28	Garlic	24	Crowder	28
Pinto	28	Gherkin	17	Field	28
Pole	28	Ginger	26	Garden	28
Runner	28	Ginseng	26	Southern	28
Snap	28	Gourd (edible/Chinese wax)	17	Sugar	28
String	28	Herbs	26	Pepper	41
Wax	28	Honey balls	17	Bell	41
Beet	4	Honeydew melon	17	California Wonder	41
Greens	4	Horseradish	26	Hot	41
Swiss chard	4	Jerusalem artichoke	26	Pimento	41
Table (Garden)	4	Kale	10	Sweet	41
Bitter melon (Balsam pear)	17	Kohlrabi	10	Peppermint	26
Bok choy	10	Leek	37	Persian melon	17
Brassicas	10	Legumes	28	Pimento	41
Broccoli	10	Lentil	28	Popcorn	14
Chinese	10	Lettuce	34	Potato	45
Flowering	10	Endive	34	Irish	45
Gai lon	10	Escarole	34	White	45
Raab	10	Head	34	Pumpkin	17
Brussels sprouts	10	Leaf	34	Radish	10
Cabbage	10	Lupine	28	Rape (Canola) greens	10
Chinese loosehead	10	Mango melon	17	Rutabaga	10
Chinese tight-heading	10	Melon	17	Salsify	26
Napa	10	Bitter	17	Scallion (Spring onion)	37
Canola (Rape) greens	10	Chinese preserving	17	Shallot	37
Cantaloupe	17	Citron	17	Soybean (edible)	28
Carrot	6	Honeydew	17	Spearmint	26
Casaba	17	Mango	17	Spinach	50
Cassava	26	muskmelon	17	Squash	17
Cauliflower	10	Persian	17	Summer/Chayote fruit	17
Celery	8	Mint	26	Winter	17
Celeriac	8	Peppermint	26	Sweet corn	14
Chicory	26	Spearmint	26	Sweetpotato	52
Chinese waxgourd (Chinese preserving melon)	17	Mung bean	28	Swiss chard	4
Chives	26	Mushroom	36	Tomato	53
Cilantro (Chinese parsley)	26	Muskmelon	17	Turnip	10
Citron melon	17	Mustard	10	Vegetables (all)	1
Cole crops	10	Chinese	10	Watercress	26
Collards	10	Greens	10	Watermelon	17
		Okra	37	Waxgourd (Chinese)	17
		Onion	37	Yams	26
		Eschalot	37		

BLANK PAGE IN ORIGINAL

BLANK PAGE IN ORIGINAL

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas Agricultural Extension Service is implied.

Educational programs of the Texas Agricultural Extension Service are open to all people without regard to race, color, sex, disability, religion, age or national origin.

Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Zerle L. Carpenter, Director, Texas Agricultural Extension Service, The Texas A&M University System.