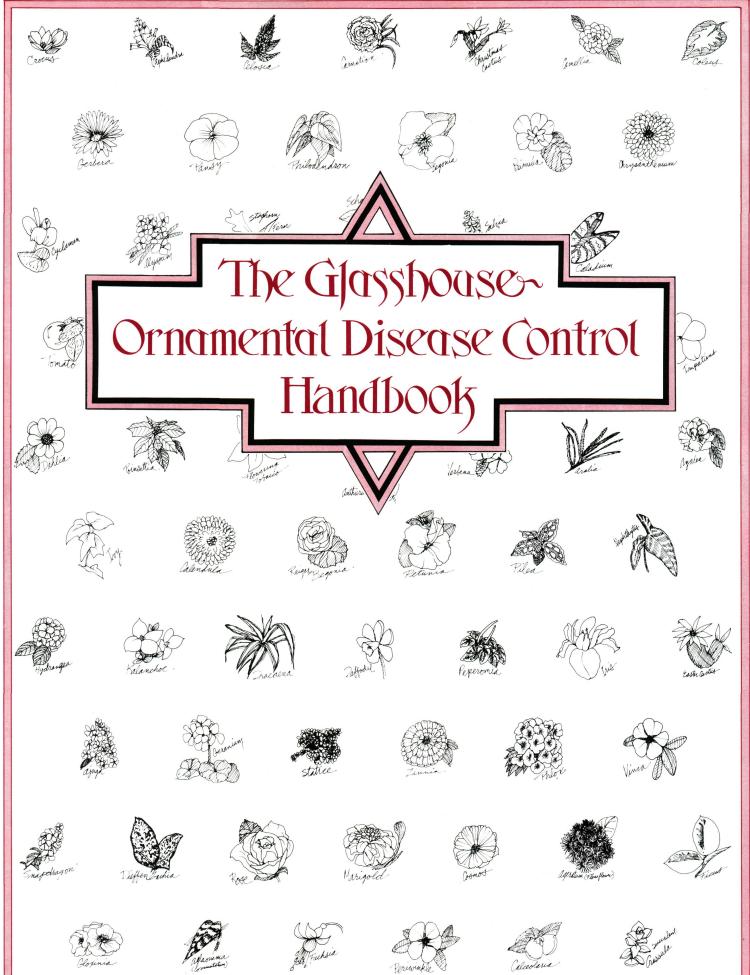
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The Glasshouse – Ornamental Disease Control Handbook Michigan State University Extension Service Christine Taylor Stephens, Department of Botany and Plant Pathology Issued April 1984 67 pages

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Introduction

There are a number of pathological and physiological disorders that affect ornamental plants grown in the greenhouse. Careful management of the environment and a vigorous program of sanitation are essential in disease avoidance. Chemicals are also one of the important means of controlling the plant pathogens. The major groups grown in Michigan greenhouses and their major disease problems are listed in this bulletin. Whenever possible, chemical control recommendations are made. In certain cases, effective chemicals are not available or are not registered for that particular use. In the appendix, a number of physiological disorders of ornamental plants and remedies are listed. Since diseases and physiological disorders can often be confused, please check this appendix frequently.

Warnings

Materials and rates of application listed in this publication are based on the latest information available at the time this publication went to press. Supplemental information will be disseminated, as the need arises, usually through the offices of County Extension Agricultural Agents. The information here is for educational purposes only. References to commercial products or trade products is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service is implied. Some of the more hazardous pesticides are on the Restricted Use Pesticide (RUP) list. You will need to be certified by the Michigan Department of Agriculture in order to buy and use these RUP's.

POISONING EMERGENCY

- A physician should always be contacted for diagnosis and treatment of a suspected poisoning. Do not try to handle it yourself.
- The nearest Poison Treatment Center should be contacted for advice if there is any delay in reaching a physician.
- Have the pesticide container at hand when you call the center so that you can clearly identify the pesticide to them.
- Follow their advice fully and get the patient to a physician as soon as possible.
- Fire and police or sheriff units can provide assistance. Contact them if you need help.



POISON TREATMENT CENTERS

In case of emergencies, the following list of poison treatment centers in Michigan will help you contact the neartest source of help that specializes in the treatment of poisoning.

Toll-free numbers are available in Detroit, Grand Rapids, Kalamazoo, and Marquette.

ADRIAN

Poison Control Center Emma L. Bixby Hospital 818 Riverside Ave. 49221 (517) 263-2412

ANN ARBOR

Poison Control Center University of Michigan Medical Center 1405 E. Ann St. 48109 (313) 764-5102

BATTLE CREEK

Poison Control Center Community Hospital 183 West 49016 (616) 963-5521

BAY CITY

Poison Control Center Bay Medical Center 100 15th St. 48706 (517) 894-6589

BERRIEN CENTER

Berrien General Hospital Deans Hill Rd. 49102 (616) 471-7761

COLDWATER

Poison Control Center Community Health Center of Branch County 274 E. Chicago St. 49036 (517) 278-7361 ext. 342

DETROIT

Poison Control Center Children's Hospital of Michigan 3901 Beaubien Blvd. 48201 (313) 494-5711 1-800-462-6642

Poison Control Center Mount Carmel Mercy Hospital 6071 W. Outer Dr. 48235 (313) 864-5400 ex. 416

ELOISE

Poison Control Center Wayne County General Hospital Maryland Rd. 48132 (313) 722-3748 or 274-3000 ext. 6231 nights and weekends I. In the event of any gross environmental contamination by pesticides, such as an accidental spill or fire, contact:

Michigan Department of Agriculture (517) 373-1087

II. For information in your area regarding disposal of chemicals and pesticides, contact:

Fred Kellow (517) 373-6620 (Michigan Dept. of Natural Resources, Solid Waste Disposal)

III. In the event of an accident on highway, railway or waterway, involving chemicals, contact:

CHEMTREC

(24 hours a day — 7 days a week) (800) 424-9300

FLINT

Hurley Hospital 6th Ave. and Begole 48502 (313) 766-0111 1-800-572-5396

GRAND RAPIDS

West Michigan Poison Center Blodgett Memorial Medical Center 1840 Wealthy, S.E. 49506 1-800-442-4571 (within 616 area code) 1-800-632-2727 (out of 616 area code)

St. Mary's Hospital 201 Lafayette, S.E. 49503 (616) 774-7854

HANCOCK

Portage View Hospital 200-210 Michigan Avenue 49930 (906) 482-1122 ex. 209

HOLLAND

Poison Control Center Holland Community Hospital 602 Michigan Ave. 49423 (616) 396-4661

JACKSON

Poison Control Center W.A. Foote Memorial Hospital 205 N. East Ave. 49201 (517) 788-4816

KALAMAZOO

Midwest Poison Control Center 1521 Gull Rd. 49001 (616) 383-7070

Great Lakes Regional Poison Control Center Bronson Methodist Hospital 252 E. Lovell St. 49006 (616) 383-6409 1-800-442-4112

LANSING

Poison Control Center St. Lawrence Hospital 1210 W. Saginaw St. 48914 (517) 372-5112 or 372-5113

MARQUETTE

Poison Control Center Marquette General Hospital 425 W. Fisher St. 49855 1-800-562-9723

MIDLAND

Poison Control Center Midland Hospital 4005 Orchard Dr. 48640 (517) 631-7700 ex. 304

PETOSKEY

Little Traverse Hospital 416 Connable (616) 347-7373

PONTIAC

Poison Control Center St. Joseph Mercy Hospital 900 Woodward Ave. 48053 (313) 858-3000

PORT HURON

Poison Control Center Mercy Hospital Poison Control Center

Port Huron Hospital 1001 Kearney St. 48060 (313) 987-5555 or 987-5000 ex. 214

SAGINAW

Poison Control Center Saginaw General Hospital 1447 N. Harrison Rd. 48602 (517) 755-1111

TRAVERSE CITY

Poison Control Center Munson Medical Center Sixth and Madison 49684 (616) 941-1131 (616) 947-6140 ex. 300

Pesticide Safety Tips

- Always read the label before buying or using pesticides. Use pesticides only for the purpose(s) listed and in the manner directed.
- Pesticides that require special protective clothing or equipment should be used only by trained, experienced applicators.
- Do not apply more than the specified amount of pesticide. Overdoses can harm you, the consumers, and the environment.
- Keep pesticides away from food and dishes.
- Keep children and pets away from pesticides and sprayed areas.
- Do not smoke or eat while applying pesticides.
- Avoid inhalation of pesticides.
- Never spray outdoors on a windy day.
- When you mix pesticides, do it carefully to avoid splashing.
- Avoid breaks or spills of pesticide containers.
- If you spill a pesticide on your skin or on your clothing, wash with detergent and water and change your clothing immediately.
- Store pesticides under lock in the original containers with proper labels. Never transfer a pesticide to a container that would attract children, such as a soft-drink bottle.
- Dispose of empty containers safely. Refer to your dealer for directions for disposal of specific containers. Wrap single containers of home use products in several layers of newspaper, tie securely and place in a covered trash can. Never burn boxes or sacks. In the case of farm or ranch use, single containers may be buried where water supplies will not be contaminated. Dispose of large quantities in special incinerators or special landfills.
- Wash with soap and water after using pesticides, and launder clothes separately from other laundry before wearing again.
- If someone swallows a pesticide, check the label for first aid treatment. Call or go to the doctor or the hospital immediately and keep the pesticide label with you.

EQUIVALENTS — ABBREVIATIONS

1 fl oz = 2 Tbsp = 6 tsp

1 cup = 8 fl oz

1 pt = 16 fl oz = 32 Tbsp

1 qt = 2 pt = 32 fl oz

1 gal = 4 qt = 128 fl oz

1 lb = 16 oz

B means Bait

D means Dust

EC means Emulsifiable Concentrate, or Emulsion

F means Flowable

G means Granule

L or LC means Liquid Concentrate

LS means Liquid Solution

RUP means Restricted Use Pesticide

S means Sprayable

SC means Suspension Concentrate

SP means Soluble Powder

W or WP means Wettable Powder

- *Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.
- **Restricted Use Pesticide (RUP) formulations of these toxicants are available only to certified applicators.

Disease Material **Formulated Rate** When To Apply How To Apply, Remarks Frequency



AFRICAN VIOLET (See Appendix, page 62, for physiological problems.)

Powdery Mildew	Bayleton 25	winter: 1 oz/50 gal;	at disease appearance	every 30 days	foliar spray, exceeding label rates for quantity
and the second	**************************************	summer: 2 oz/50 gal		$\frac{\partial \mathcal{L}_{\mathcal{L}}}}}}}}}}$	or time interval may shorten flower stalks
	*Milban EC	32 fl oz/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal 1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
ing the state of t	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Karathane WD	4 to 6 oz/100 gal (2 Tbsp/12.5 gal)	at disease appearance	every 7 to 10 days	foliar spray
Crown & Root Rot	Subdue 2E	0.5 to 2 fl oz/ 100 gal/400 to	at planting	every 6 wk	soil drench
(Pythium と Phytophthora)	#1.46	800 sq ft (1 to 2 pt/sq ft)			
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	3 to 10 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
No. of the second	Truban 25% EC	4 to 8 oz/100	at planting	every 4 to 12 wk	soil drench
	(3.3), 40))	gal/400 sq ft (0.5 pt/6" pot)			
	Lesan 35%	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench, use 0.25 ll rate on small plants and after initial drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
inger vita	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal to 1,000 sq ft	preplant	once	drench
Root Rot (general)	Banrot	6 to 12 oz/100 gal (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation

*Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

*Restricted Use Pesticides (RUP); formulations of these toxicants are available only to certified applicators.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
AFRIC	CAN VIOLET, Con	ntinued			
Root Rot (general)	Orthocide 50 W	2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Viruses, best c	ontrol is disease-fro	ee cuttings			. 16
AGE	CRATUM				
Damping off Stem and Root Rot (general)	Banrot	4 to 8 oz/100 gal/800 sq ft (1 gal/8 sq ft)	at seeding.& at transplant	every 4 to 8 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off (Pythium)	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft 1 to 2 pt/sq ft	at planting	every 6 wk	soil drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	4 to 6 oz/100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Truban 25% EC	3 to 4 oz/100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Powdery Mildew	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
		e Search (Secretary)		. You was as a second	
AGERA	TUM, Continued				
Powdery	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
Mildew -	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Grey Mold (Botrytis)	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
~	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
_	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
AGL	AONEMA				
Damping off Root & Stem	Banrot WP	6 to 12 oz/100 gal/400 sq ft	at planting	every 2 to 3 months	soil drench
Rot (general)	Captan 50W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
보다 생생 교육원	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporatio
	Orthocide 50W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporatio
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
- 4.	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off Root & Stem	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft	at planting	every 6 wk	soil drench
Rot (Pythium)	20 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 to 2 pt/sq ft			
	Lesan 35 WP	0.25 to 0.5 lb/	at planting	every 2 to 4 wk	soil drench, use 0.25
		100 gal (0.5 pt/6" pot)	SHA DAKE SA	to familiar of	rate after initial dren
	Truban 5G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	8 to 12 oz/100 gal/400 sq ft	at planting	every 2 to 3 months	
	Truban 25% EC	4 to 8 oz/100 gal/400 sq ft	at planting	every 4 to 12 wk	soil drench
		(0.5 pt/6" pot)			
	Terrazole 35% WP	bedding plants: 2 to 3 oz/50 gal/400 sq ft	at seeding & at transplant	1 to 2 months	soil drench
		pot plants: 1.5 to 5 oz/50 gal (0.5 pt/6" pot)	after potting	every 2 to 3 months	soil drench
Damping off Root & Stem Rot	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
(Rhizoctonia) _	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
filagjan – -			amppanie	=	(continued next pag

	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
AGLA	ONEMA, Continue	ed			
Damping off, Root & Stem	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
Rot (Rhizoctonia)	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
AJU	GA				
Damping off (Rhizoctonia, Sclerotinia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	drench
ALY	SSUM				
Damping off (general)	Banrot	4 to 8 oz/100 gal/ 800 sq ft	at seeding & at transplant	every 4 to 8 wk	soil drench
		1 gal/8 sq ft			
\G***\	Captan 50W	1 gal/8 sq ft 0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 50W Captan 80 WP	0.2 to 0.4 lb/	preplant	once	dust, soil incorporation
\G		0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at			soil drench
\G	Captan 80 WP	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/	preplant	once	soil drench dust, soil incorporation
AQ	Captan 80 WP Orthocide 10	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/	preplant preplant	once	soil drench dust, soil incorporation
\Q\w\)	Captan 80 WP Orthocide 10	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at	preplant preplant preplant	once once	soil drench dust, soil incorporation dust, soil incorporation
\Q \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Captan 80 WP Orthocide 10 Orthocide 50W	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft	preplant preplant preplant preplant	once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench
Damping off	Captan 80 WP Orthocide 10 Orthocide 50W Orthocide 7.5	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/	preplant preplant preplant preplant preplant preplant	once once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation
Damping off	Captan 80 WP Orthocide 10 Orthocide 50W Orthocide 7.5 Orthocide 5	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft	preplant preplant preplant preplant preplant preplant	once once once once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation
Damping off	Captan 80 WP Orthocide 10 Orthocide 50W Orthocide 7.5 Orthocide 5	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft 5 oz/cu yd soil mix 4 to 6 oz/100 gal/ 800 sq ft	preplant preplant preplant preplant preplant preplant preplant preplant at seeding &	once once once once once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil incorporation
Damping off (Pythium)	Captan 80 WP Orthocide 10 Orthocide 50W Orthocide 7.5 Orthocide 5 Truban 5G Truban 30% WP	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 5 oz/cu yd soil mix 4 to 6 oz/100 gal/ 800 sq ft (1 gal/8 sq ft) 3 to 4 oz/100 gal/ 800 sq ft	preplant preplant preplant preplant preplant preplant preplant preplant at seeding & at transplant at seeding &	once once once once once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil incorporation soil drench

ALYS Damping off (Rhizoctonia)	Benlate DF Benomyl 50% WP Tersan 1991	0.66 lb/100 gal 1 Tbsp/gal			
Damping off	Benlate DF Benomyl 50% WP				
	Benomyl 50% WP				
(Rhizoctonia)		1 Tbsp/gal	after transplant	every 2 to 4 wk	soil drench
	Tersan 1991	(1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
		1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1.000 sq ft	preplant	once	soil drench
Downy Milde	w, no registered che	emical control			
Club Root, no	chemical control				
AN	THERIUM (Se	ee Appendix, pag	e 62, for physiologic	cal problems.)	
Root Rot (general)	Captan 50W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5 Orthocide 5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1.000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Truban 5G	5 oz/cu yd soil mix	preplant	once	soil incorporation
	Truban 30% WP	bedding plants: 4 to 6 oz/100 gal (1 gal/8 sq ft)	at seeding	every 4 to 8 wk	soil drench
		pot plants: 8 to 12 oz/100 gal/400 sq ft	at planting	every 2 to 3 months	soil drench
	Truban 25% EC	4 to 8 oz/100 gal/ 400 sq ft	at planting	every 2 to 3 months	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly planted areas	every 2 to 4 wk	soil drench, use 0.25 ll rate after initial drench
	Terrazole 35% WP	bedding plants: 2 to 3 oz/50 gal/ 400 sq ft	at seeding & at transplant	1 to 2 months	soil drench
		pot plants: 1.5 to 5 oz/50 gal (0.5 pt/6" pot)	after potting	every 2 to 3 months	soil drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
•	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	$\frac{2 \text{ lb}}{1,000 \text{ sq ft}}$	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
ANTI	HERIUM, Continue	d			
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	
. No	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
API	HELANDRA	(See Appendix, p	page 62, for physiolo	gical problems.)	
Root Rot (general)	Captan 50W	0.2 to 4 lb/ 1,000 sq ft	preplant	once	dust
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Subdue 2E	0.4 to 1.2 fl oz/ 100 gal/400 to 800 sq ft (1 to 2 pt/sq ft)	at planting	every 2 to 3 months	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 ll rate at seeding
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	weekly	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	
	Exotherm Termil		at disease appearance	every 2 wk	dust (fumigant)

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease Material **Formulated Rate** When To Apply How To Apply, Remarks Frequency



ARALIA (See Appendix, page 62, for physiological problems.)

Damping off Stem & Root Rot (general)	Banrot WP	6 to 12 oz/100 gal/400 sq ft	at planting	every 2 to 3 months	soil drench
	Captan 50W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off Stem & Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	after plants are set	every 2 to 4 wk	soil drench, use 0.25 lb rate after initial drench
Damping off Stem & Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray

ASTER (Chinese)

Aster Yellows, best control is to control leafhopper	Aster	er Yellows,	best	control	is	to	control	leathopper	S
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T	XX7.1.	1 .	. 1			
Fusarium	Wilt	hest	control	15	sanitat	TOD

	,	Debe		01 10	Destruction
Root Rot		Ban	rot		4 to
(general)					800

11	Will, Dest control is	Samtation			
t)	Banrot	4 to 8 oz/100 gal/ 800 sq ft (1 gal/ 8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
A CITIE	D (Chinasa) Cont				
	R (Chinese), Cont		11		last soil is somewhite.
Root Rot (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft 1 to 2 pt/sq ft	at planting	every 6 wk	soil drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	4 to 6 oz/100 gal (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 li rate at seeding
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Rust, no regis	tered chemical cont	rol			
AZ	ALEA (See App	pendix, page 62, fo	or physiological prob	olems.)	
Grey Mold (Botrytis)	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
Flower Spotting (fungal)	Zyban	1.5 lb/100 gal	at disease appearance	every 7 days	foliar spray
Exobasidum l	eaf galls, no registe	red chemical contr	ol		
Root Rot (Pythium & Phytophthora	Subdue 2E	1 to 2.4 oz/100 gal/400 to 800 sq ft of bed area	at potting	every 2 to 4 months	soil drench
	Aliete	6.5 to 13 oz/cu yd	at potting	once	soil incorporation
		1 to 2 lb/100 gal/ 1,000 cu yd	at disease appearance	monthly	drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 25% EC	4 to 8 oz/100 gal/ 400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
AZAL	EA, Continued				
Root Rot (Pythium と Phytophthora)	Lesan 35% WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at potting	every 2 to 4 wk	soil drench, use 0.25 li rate on seedlings afte initial drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	preplant	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50 WP	1 Tbsp/gal	preplant	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	preplant	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Root Rot (general)	Banrot	6 to 12 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	preplant only	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	preplant only	soil drench
	Orthocide 10	1.5 to 2 lb/ 1,000 sq ft	preplant	preplant only	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	preplant only	dust, soil incorporation
	<u>43.</u>	2 lb/100 gal at 15 gal/1,000 sq ft	preplant	preplant only	spray
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	preplant only	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	preplant only	dust, soil incorporation
BEG	ONIAS (See	d and Tuber	ous)		
Damping off, Crown & Root Rot	Banrot	4 to 8 oz/100 gal/ 800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
(general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	$1.25~{ m lb}/100~{ m gal}$ at $15~{ m gal}/1,\!000~{ m sq}$ ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
(1 <i>giiiiiii)</i>	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft	at planting	every 6 wk	soil drench

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
BEG	ONIAS (Seed and T	Tuberous), Continu	ied		
Root Rot (Pythium)	Subdue 2E	0.5 to 2 fl oz/ 100 gal/800 sq ft	at transplant	every 1 to 2 months	soil drench
	Truban 30% WP	4 to 6 oz/100 gal/ 800 sq ft (1 gal/8 sq ft)	at planting	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 ll rate at seeding
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp /gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Ornalin	1 to 1.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 2 wk	dust (fumigant)
Powdery Mildew	**Milban EC	32 fl oz/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Karathane WD	4 to 6 oz/100 gal (2 Tbsp/ 12.5 gal)	at disease appearance	every 7 to 10 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Actidione PM	5 Tbsp/gal	at disease appearance	every 7 days	foliar spray
Bacterial leaf spot	Kocide 101	1 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
CAC	C TI (See Append	ix, page 62, for pi	hysiological problem	s.)	
Root Rot (general)	Banrot	6 to 12 oz/100 gal/400 sq ft	at planting	every 2 to 3 months	soil drench
	Captan 50 W	0.2 to 0.4 lb/	preplant	once	dust, soil incorporation

Root Rot (general)	Banrot	6 to 12 oz/100 gal/400 sq ft	at planting	every 2 to 3 months	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

*Restricted Use Pesticides (RUP); formulations of these toxicants are available only to certified applicators.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
CACT	I, Continued				
Root Rot (general)	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 l
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
,	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
•	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust
Ala		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Vac	JADIUM usarium), no effective	ve chemical contro	1		
Tuber Rot (Rhizoctonia)	Benlate	1 lb/100 gal 1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
•	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Banrot WP	6 to 12 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Benomyl 50% WP	1Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
· '	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
Fuber Rot (Sclerotinia)	Benlate	1 lb/100 gal 1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
Dasheen Mosa	aic Virus, no chemic	al control			
CAI	CEOLARIA				
Root Rot (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/	preplant	once	dust, soil incorporation

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
			-		
CALC	CEOLARIA, Contin	ued			
Root Rot (general)	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	3 to 10 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 ll rate at seeding
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
Verticillium V	Vilt, no effective che	emical control			
CAI	LENDULA				
Grey Mold (Botrytis)	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
¥2.00	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Powdery Mildew	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Karathane WD	4 to 6 oz/100 gal (2 Tbsp/12.5 gal)	at disease appearance	every 7 to 10 days	foliar spray

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease Material Formulated Rate When To Apply Frequency How To Apply, Remarks

CALENDULA, Continued

Fungal Leaf Spot, no registered chemical control

Rust, no registered chemical control

Viruses, no chemical control

Aster Yellows, best control is to control leafhopper

CAMELLIA

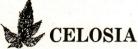
Root Rot (general)	Banrot WP	6 to 12 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5 2.5 to 4 lb/ 1,000 sq ft		preplant	once	dust, soil incorporation
Root Rot (Pythium)	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	3 to 10 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Zyban	1.5 lb/100 gal	at disease appearance	every 7 days	foliar spray
	Benlate	0.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	
	Tersan 1991	0.5 lb/100 gal 1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	
Fungal Leaf	Zyban	1.5 lb/100 gal	at disease appearance	every 7 days	foliar spray
Spots (Phylosticta, Cercospora)	*Fore	1.5 lb/100 gal	at disease appearance	every 7 to 10 days	foliar spray

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
CAMI	ELLIA, Continued				
Crown Gall	*Gallex	as labeled	at disease appearance	every 4 to 6 months if galls persist	paint
CAI	RNATION				des en la companya de
Root Rot (general)	Banrot WP	6 to 12 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Subdue 2E	bedding plants: 0.25 to 0.5 fl oz/ 100 gal/800 sq ft (1 pt/sq ft)	at planting	every 6 wk	soil drench
		pot plants: 0.5 to 2 fl oz/ 100 gal/400 to 800 sq ft (1 to 2 pt/sq ft)	at planting	every 6 wk	soil drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	4 to 6 oz/100 gal (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Truban 25% EC	4 to 8 oz/100 gal/ 400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench, use 0.25 lb rate after initial drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Rust	Bayleton 25 Turf & Ornamental	winter: 1 oz/50 gal; summer: 2 oz/50 gal	at disease appearance	every 30 days	foliar spray, excess rates may shorten flower stalks

*Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
CARN	NATION, Continued	l			
Rust	Dithane Z-78	1.5 lb/100 gal (1 Tbsp/gal)	at disease appearance	every 7 to 10 days	foliar spray
	Captan 50 W	2 lb/100 gal	at disease appearance	every 7 to 10 days	foliar spray
	Captan 80 WP	1.25 lb/100 gal	at disease appearance	every 7 to 10 days	foliar spray
	Dithane Z-78	foliar spray			
Fusarium Wilt	Benlate		at planting	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal	at planting	every 2 to 4 wk	soil drench
	Tersan 1991		at planting	every 2 to 4 wk	soil drench
Alternaria Leafspot	Dithane Z-78	$1.5~\mathrm{lb}/100~\mathrm{gal}$	at disease appearance	every 7 to 10 days	foliar spray
CARNA Rust Cusarium Vilt Crey Mold Botrytis) CELI Leaf Spots, no	*Fore	1.5 lb/100 gal	at disease appearance	every 7 to 10 days	foliar spray
	Captan 50 W	2 lb/100 gal	at disease appearance	every 7 to 10 days	foliar spray
	Captan 80 WP	$1.25 \ \mathrm{lb}/100 \ \mathrm{gal}$	at disease appearance	every 7 to 10 days	foliar spray
	Captan 50 WP	8 teaspoons/gal	at disease appearance	every 7 to 10 days	foliar spray
	Kocide 101	1 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
Grev Mold	Chipco 26019	1 to 2 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
(Botrytis)		0.75 to 1 lb/			
			at disease appearance	every 7 to 14 days	foliar spray
	Daconil 2787 F	2 pt/100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
	Zyban	$1.5 \mathrm{lb}/100 \; \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	$0.5 \mathrm{lb}/100 \; \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	$0.33\ \mathrm{lb}/100\ \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
		(1 Tbsp/2 gal)	at disease appearance		
	Kocide 101	1 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
CEI	LERY				
Leaf Spots, no	registered chemica	al control			
Damping off (general)	Captan 50 W		preplant	once	dust, soil incorporation
			preplant	once	soil drench
	<u> </u>	1,000 sq ft		once	dust, soil incorporation
	Orthocide 50 W	1,000 sq ft			dust, soil incorporation
		15 gal/1,000 sq ft	preplant	once	soil drench
			preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.



Damping off (general)	Banrot	4 to 8 oz/100 gal/ 800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	4 to 6 oz/100 gal (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Truban 25% EC	3 to 4 oz/100 gal/ 800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench

Fungal Leaf Spot, no registered chemical control



CHRISTMAS CACTUS (See Appendix, page 62, for physiological problems.) (Zygocactus)

Root Rot (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal /1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
CHRI	ISTMAS CACTUS,	Continued			
Root Rot	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
(general)	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Sclerotinia,	Benlate	1 lb/100 gal (1 to 2pt/sq ft)	at planting	every 2 to 4 wk	soil drench
Rhizoctonia)	Benlate DF	$0.66 \; \mathrm{lb}/100 \; \mathrm{gal}$	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
222		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
CHI Stem & Root	RYSANTHEN Banrot WP	MUM (See Apple 6 to 12 oz/100	endix, page 62, fo	r physiological probl	ems.)
Rot (general)		gal/400 sq ft (0.5 pt/6" pot)			
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Stem & Root Rot (Pythium)	Subdue 2E	0.5 to 2 fl oz/ 100 gal/400 to 800 sq ft (1 to 2 pt/sq ft)	at planting	every 6 wk	soil drench
	Truban 5 G	10 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	3 to 10 oz/100 gal/400 sq ft	at planting	every 4 to 12 wk	soil drench
	Truban 25% WP	(0.5 pt/6" pot) 4 to 8 oz/100 gal/ 400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 months	soil drench
	Terrazole 35%	bedding plants: 2 to 3 oz/50 gal/ 400 sq ft	at seeding & at transplant	1 to 2 months	soil drench
		pot plants: 1.5 to 5 oz/50 gal (0.5 pt/6" pot)	after potting	every 2 to 3 months	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench, use 0.25 ll rate after initial drench

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease

Material

Formulated Rate

When To Apply

Frequency

How To Apply, Remarks

Stem & Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
(Tonzociona)	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Chipco 26019	1 to 2 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 7 days	foliar spray
	Daconil 2787 (W-75)	1.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Daconil 2787 F	2 pt/100 gal	at disease appearance	every 10 to 14 days	foliar spray
7	Benlate	0.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Kocide 101	1 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Tersan 1991	$0.5 \mathrm{lb}/100 \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray
	Botran 75 W	0.5 to 0.75 lb/ 100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
Powdery Mildew	Bayleton 25 Turf & Ornamental	winter: 1 oz/50 gal; summer: 2 oz/50 gal	at disease appearance	every 30 days	foliar spray, excess rates may shorten flower stalks
	Karathane WD	4 to 6 oz/100 gal (2 Tbsp/12.5 gal)	at disease appearance	every 7 to 10 days	foliar spray
	**Milban EC	32 fl oz/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Actidione PM	5 Tbsp/gal	at disease appearance	every 7 days (every 3 to 5 days, if severe)	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Alternaria Leaf Spot	Daconil 2787 (W-75)	1.5 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Daconil 2787 F	2 pt/100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray
	*Fore	1.5 lb/100 gal	at disease appearance	every 7 to 10 days	foliar spray

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

*Restricted Use Pesticides (RUP); formulations of these toxicants are available only to certified applicators.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
CHRY	SANTHEMUM, C	ontinued			
Bacterial Wilt (Erwinia chrysanthemi)	*Agri-Strep	50 ppm	preplant	once	soak basal ends for 6 hours
Fusarium Wilt	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	preplant	drench every 2 to 4 wk	soak cuttings 10 to 15 min & drench soil
	Tersan 1991	1 lb/100 gal	preplant	drench every 2 to 4 wk	soak cuttings 10 to 15 min & drench soil
	Benomyl 50% WP	1 Tbsp/gal	preplant	drench every 2 to 4 wk	soak cuttings 10 to 15 min & drench soil
Verticillium W	ilt, no effective che	emical control			
COL	EUS				States Haraset
Damping off	Banrot	4 to 8 oz/100 gal/	at seeding &	every 4 to 8 wk	soil drench
(general)		800 sq ft (1 gal/8 sq ft)	at transplant		
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporatio
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporatio
Damping off (Pythium)	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft	at planting	every 4 to 8 wk	soil drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30 WP	4 to 6 oz/100 gal/ 800 sq ft (1 gal/8 sq ft)	at planting	every 4 to 8 wk	soil drench
	Truban 25% EC	3 to 4 oz/100 gal/ 800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 rate at seeding
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporatio
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Chipco 26019	$1 ext{ to } 2 ext{ lb}/100 ext{ gal}$	at disease appearance	every 10 to 14 days	foliar spray

Materials commercially used in greenhouses, but not yet legally registered for greenhouse use

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
COLE	US, Continued				
Grey Mold (Botrytis)	Ornalin	0.75 to 1 gal/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	$0.33 \; \mathrm{lb}/100 \; \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
Bacterial Leaf	Spot, no registered	d chemical control			
Cos	Mos				
Powdery Mildew	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Aster Yellows,	best control is to c	ontrol leafhoppers			
CRI	JCIFERS	0.2 to 0.4 lb /			dust soil in comparation
CRU Damping off	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	
CRU Damping off	Captan 50 W	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once once	soil drench
CRU Damping off	Captan 50 W Captan 80 WP Orthocide 10	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft	preplant preplant		soil drench dust, soil incorporatio
CRU Damping off	Captan 50 W	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft	preplant	once	soil drench dust, soil incorporatio
CRU Damping off	Captan 50 W Captan 80 WP Orthocide 10	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/	preplant preplant	once	soil drench dust, soil incorporatio
CRU Damping off	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 7.5	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft	preplant preplant preplant	once once	soil drench dust, soil incorporation dust, soil incorporation soil drench
CRU Damping off	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft	preplant preplant preplant preplant	once once once	dust, soil incorporation
CRU Damping off (general)	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 7.5	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/	preplant preplant preplant preplant preplant	once once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation
CRU Damping off CUC Damping off	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 7.5 Orthocide 5	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/	preplant preplant preplant preplant preplant preplant preplant	once once once once once	soil drench dust, soil incorporatio dust, soil incorporatio soil drench dust, soil incorporatio
CRU Damping off general) CUC Damping off Pythium) Damping off	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 7.5 Orthocide 5	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft	preplant preplant preplant preplant preplant preplant preplant	once once once once once once once	soil drench dust, soil incorporatio dust, soil incorporatio soil drench dust, soil incorporatio dust, soil incorporatio
CRU Damping off general) CUC Damping off Pythium) Damping off	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 7.5 Orthocide 5 CURBITS Lesan 70% WP	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft 3 oz/100 lb of seed 0.2 to 0.4 lb/	preplant preplant preplant preplant preplant preplant preplant preplant	once once once once once once once once	soil drench dust, soil incorporatio dust, soil incorporatio soil drench dust, soil incorporatio dust, soil incorporatio
CRU Damping off (general)	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 7.5 Orthocide 5 CURBITS Lesan 70% WP Captan 50 W	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft 3 oz/100 lb of seed 0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at	preplant preplant preplant preplant preplant preplant preplant preplant	once once once once once once once once	soil drench dust, soil incorporatio dust, soil incorporatio soil drench dust, soil incorporatio dust, soil incorporatio seed treatment dust, soil incorporatio
CRU Damping off (general) CUC Damping off (Pythium) Damping off	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 7.5 Orthocide 5 CURBITS Lesan 70% WP Captan 50 W Captan 80 WP	1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft 3 oz/100 lb of seed 0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/	preplant	once once once once once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation seed treatment dust, soil incorporation soil drench

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
CUC	URBITS, Continued		and the second		
Damping off	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
(general)	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Powdery Milo	dew, no registered c	hemical control			
Grey Mold (Botrytis)	Botran 75	1 lb/100 gal	at disease appearance	weekly	foliar spray from ground up
CY	CLAMEN (See	Appendix, page	62, for physiological	problems.)	
Grey Mold (Botrytis)	Chipco 26019	1 to 2 lb/100 gal	at disease appearance	every 10 to 14 days	soil drench
	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	soil drench
	Benlate	0.5 lb/100 gal	at disease appearance	every 10 to 14 days	soil drench
	Benlate DF	$0.33 \mathrm{lb}/100 \; \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	soil drench
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	soil drench
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
Erwinia Soft	Crown Rot, no effec	tive chemical cont	rol		
1 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	OCUS, DAFF YACINTH, N	, ,	(See Appendix, page	es 62-63, for physi	ological problems.)
Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at transplant	every 2 to 4 wk	soil drench
Bulb Rots	Benlate	1.66 lb/100 gal	preplant	once	dip for 15 to 30 min

Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at transplant	every 2 to 4 wk	soil drench
Bulb Rots (Rhizoctonia, Penicillium, & Fusarium)	Benlate	$\begin{array}{c} 1.66 \text{ lb/100 gal} \\ (2 \text{ Tbsp/gal}) \end{array}$	preplant	once	dip for 15 to 30 min
	Benlate DF	1.1 lb/100 gal	preplant	10 to 15 min in 80 to 85°F. solution	dip, once
	Tersan 1991	1.66 lb/100 gal (2 Tbsp/gal)	preplant	once	dip for 15 to 30 min
	Benomyl 50 WP	2 Tbsp/gal	preplant	once	dip for 15 to 30 min
	*Mertect 340-F	30 fl oz/100 gal	preplant	once	dip for 15 to 30 min
	*Terraclor 75	3.25 to 6.5 lb/ 1,000 sq ft	preplant	once	dust, soil surface, soil incorporation
		3 lb/4.85 gal	preplant	once	dip, 5 min
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray, use on Narcissus only
	Chipco 26019	1 to 2 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp /gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
DAI	HLIA				
Powdery Mildew	Karathane WD	4 to 6 oz/100 gal (1 Tbsp/gal)	at disease appearance	every 7 to 10 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	$0.33 \mathrm{lb}/100 \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Fusarium and	Verticillium Wilt,	no registered chem	nical control		
Root Rot (general)	Banrot	4 to 8 oz/100 gal 800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/100 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Truban 5 G	5 oz/cu yd of soil mix	preplant	once	soil incorporation
	Truban 30% WP	4 to 6 oz/100 gal/ 800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Truban 25 EC	3 to 4 oz/100 gal (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 l rate on seedlings after initial drench
Root Rot (Rhizoctonia)	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	$0.66 \mathrm{lb}/100 \mathrm{gal}$	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench

TSWV (Tomato Spotted Wilt Virus), no effective chemical control

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease Material Formulated Rate When To Apply Frequency How To Apply, Remarks



DIEFFENBACHIA (See Appendix, page 62, for physiological problems.)

Damping off	Banrot WP	6 to 12 oz/100	at planting	every 2 to 3 months	soil drench
(general)		gal/400 sq ft			
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	$1.25~{ m lb}/100~{ m gal}$ at $15~{ m gal}/1,\!000~{ m sq}$ ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Subdue 2E	0.4 to 1.2 fl oz/ 100 gal/400 to 800 sq ft (1 to 2 pt/sq ft)	at planting	every 2 to 3 months	soil drench
	Truban 5 G	5 oz/eu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	8 to 12 oz/100 gal 400 sq ft	at planting	every 2 to 3 months	soil drench
	Truban 25% EC	4 to 8 oz/100 gal/ 400 sq ft	at planting	every 2 to 3 months	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench, use 0.25 lk rate on seedlings after initial drench
	Terrazole 35%	bedding plants: 2 to 3 oz/50 gal/ 400 sq ft	at seeding & at transplant	1 to 2 months	soil drench
		pot plants: 1.5 to 5 oz/50 gal (0.5 pt/6" pot)	after potting	every 2 to 3 months	soil drench
Root Rot (Rhizoctonia)	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	$0.66 \; \mathrm{lb}/100 \; \mathrm{gal}$	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
Anthracnose	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray

DRACAENA (See Appendix, pages 62-63, for physiological problems.)

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
DRAC	CAENA, Continued				
Root Rot (general)	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporatio
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Daconil 2787 F	2 pt/100 gal	pre-transplant	every 7 to 10 days as needed	foliar spray
	Daconil 2787 (W-75)	1.5 lb/100 gal	pre-transplant	every 7 to 10 days as needed	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
Anthracnose	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray
R m	Daconil 2787 F	2 pt/100 gal	pre-transplant	every 7 to 14 days	foliar spray
	Daconil 2787 (W-75)	1.5 lb/100 gal	pre-transplant	every 7 to 14 days	foliar spray
EGG	PLANT				
Damping off and Root Rot (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench

soil drench

(continued next page)

every 2 to 4 wk

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
FCCI	PLANT, Continued				
Damping off and Root Rot	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
(general)	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
A STATE OF THE		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
FEF	RNS (See Appen	dix, page 63, for	physiological proble	ms.)	
Grey Mold (Botrytis)	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal	at disease appearance	every 10 to 14 days	soil drench
(3)	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	soil drench
Root Rot (general)	Banrot	4 to 8 oz/100 gal/ 800 sq ft (1 gal/8 sq ft)	at planting & at transplant	every 4 to 8 wk	soil drench
(general)	Captan 50 W		preplant	once	dust, soil incorporation
		1,000 sq ft			
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at transplant	every 2 to 4 wk	soil drench
	Truban 25% EC	4 to 8 oz/100 gal/ 400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
		1 1-1			

1 lb/100 gal (1 to 2 pt/sq ft) at planting

Tersan 1991

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
	,				4
FICU	S, Continued				
Root Rot	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
Rhizoctonia)	Terración 70	2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Anthracnose,	no registered chemi	cal control			
FLO	WERING TO	OBACCO			
Downy Milde	w, no registered che	emical control			
Alternaria Lea	af Spot, no registere	d chemical control			
Powdery Mildew	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	$0.33 \mathrm{lb}/100 \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Root Rot (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz / 100 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 l rate after initial drenc
Root Rot (Rhizoctonia)	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
FUC	CHSIA (See Ap	ppendix, page 63,	for physiological pro	bblems.)	
Root Rot (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
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^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
FUCH	ISIA, Continued				
Root Rot (general)	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	$0.33~\mathrm{lb}/100~\mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
\$	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
GEI	RANIUM (See	Appendix, page	63, for physiological	problems.)	
Damping off Root & Stem	Banrot WP	bedding plants: 4 to 8 oz/100 gal/	at seeding & at transplant	every 4 to 8 wk	soil drench
Rot (general)		800 sq ft (1 gal/8 sq ft)			
		pot plants: 6 to 12 oz/100 gal/400 sq ft	after potting	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
GERA	ANIUM, Continued				
Damping off Root & Stem Rot (Pythium)	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft (1 pt/8 sq ft)	at planting	every 6 wk	soil drench
	Truban 5 G	bedding plants: 5 oz/cu yd of soil	preplant	once	soil incorporation
		pot plants: 10 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% EC	bedding plants: 4 to 6 oz/100 gal/800 sq ft	at seeding & at transplant	every 4 to 12 wk	soil drench
		pot plants: 3 to 10 oz/100 gal/400 sq ft (0.5 pt/6" pot)	after potting	every 4 to 12 wk	soil drench
	Truban 25% EC	bedding plants: 3 to 4 oz/100 gal/800 sq ft	at seeding & at transplant	every 4 to 8 wk	soil drench
		pot plants: 4 to 8 oz/100 gal	after potting	every 4 to 12 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft (0.5 pt/6" pot)	newly seeded areas	every 2 to 4 wk	soil drench
Damping off Root & Stem Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
(10020ctonia)	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Chipco 26019	1 to 2 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Daconil 2787 (W-75)	$1.5~\mathrm{lb}/100~\mathrm{gal}$	at disease appearance	every 7 to 10 days	foliar spray
	Daconil 2787 F	2 pt/100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	every 7 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Botran 75 W	0.5 to 0.75 lb/ 100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
		o Spanis and and			
GERA	NIUM, Continued			na la calle courier du Miller	
Rust	Daconil 2787 (W-75)	1.5 lb/100 gal	at disease appearance	every 7 to 10 days	foliar spray
	Daconil 2787 F	2 pt/100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Bayleton	1 to 2 oz / 50 gal	at disease appearance	every 7 to 14 days	foliar spray
	Plantvax 75 W	1.6 to 2.4 oz/10 gal	at disease appearance	every 2 wk	foliar spray, maximum of 4 treatments
Bacterial Leaf	Spot, Stem Rot, n	o chemical control,	, buy clean stock		
GEF	RBERA				
Root Rot (general)	Banrot WP	6 to 12 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	$1.25~{ m lb}/100~{ m gal}$ at $15~{ m gal}/1,\!000~{ m sq}$ ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot	Truban 5 G	10 oz/cu yd of soil	preplant	once	soil incorporation
(Pythium)	Truban 30% WP	3 to 10 oz/100	at planting	every 4 to 12 wk	soil drench
		gal/400 sq ft (0.5 pt/6" pot)			
	Truban 25% EC	4 to 8 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 ll rate at seeding
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance		

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
GERB	ERA, Continued				
Grey Mold (Botrytis)	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Powdery Mildew	Karathane WD	4 to 6 oz/100 gal (2 Tbsp/12.5 gal)	at disease appearance	every 7 to 10 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
GLO Stem, Crown & Root Rot (general)	XINIA (See A	Appendix, page 65 6 to 12 oz/100 gal/400 sq ft (0.5 pt/6" pot)	3, for physiological p	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Stem, Crown & Root Rot (Pythium)	Truban 5 G	10 oz/cu yd of soil	preplant	once	soil incorporation
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal	at planting	every 2 to 4 wk	soil drench
Stem, Crown & Root Rot (Rhizoctonia)	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
HYI	DRANGEA (S	See Appendix, pag	ge 63, for physiologic	cal problems.)	
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Daconil 2787 (W-75)	$1.5 \mathrm{lb}/100 \; \mathrm{gal}$	at disease appearance	every 7 to 14 days	foliar spray
	Daconil 2787 F	2 pt/100 gal	at disease appearance	every 7 to 14 days	foliar spray

*Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
HYDR	ANGEA, Continue	d			
Grey Mold (Botrytis)	Benlate	$0.5 \ \mathrm{lb}/100 \ \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	$0.33~\mathrm{lb}/100~\mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
Powdery Mildew	Karathane WD	4 to 6 oz/100 gal (2 Tbsp/12.5 gal)	at disease appearance	every 7 to 10 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Ring Spot Viru	s, no chemical con	trol			
Time spot viru	s, no chemical con-				
IMP.	ATIENS				
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
e	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray
	Benlate	0.5 lb/100 gal (1Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	$0.33 \mathrm{lb}/100 \; \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
Damping off, Crown and Root Rot (general)	Banrot	4 to 8 oz/100 gal (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/	preplant	once	dust, soil incorporation
100	Orthocide 5	1,000 sq ft			
Damping off (Pythium)	Subdue 2E	1,000 sq ft 0.25 to 0.5 fl oz/ 100 gal/800 sq ft (1 pt/sq ft)	at planting	every 6 wk	soil drench

(continued next page)

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
IMPA	TIENS, Continued				
Damping off	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
(Pythium)	Truban 30% WP	4 to 6 oz/100 gal/ 800 sq ft (1 gal/8 sq ft)	at planting	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	once	soil drench
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	$0.66 \; \mathrm{lb}/100 \; \mathrm{gal}$	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
(WA)		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
IRIS	8				
Grey Mold (Botrytis)	Chipco 26019	1 to 2 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
()	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	$0.33 \mathrm{lb} / 100 \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Daconil 2787 F	1.5 pt/100 gal	at bud break	every 7 to 14 days	foliar spray
		2 pt/100 gal	at disease appearance	every 7 to 14 days	foliar spray
Basal Rot Fusarium, Rhizoctonia, Sclerotinia)	Benlate	1.33 lb/100 gal (2 Tbsp/gal)	48 hours after digging	once–soak 15 to 30 min in warm dip (80 to 85° F)	dip
	Benlate DF	1.1 lb/100 gal	preplant	once–soak 10 to 15 min in warm dip (80 to 85° F)	dip
	Benomyl 50% WP	2 Tbsp/gal	48 hours after digging	once–soak 15 to 30 min in warm dip (80 to 85° F)	dip
	Tersan 1991	1.66 lb/100 gal (2 Tbsp/gal)	48 hours after digging	once–soak 15 to 30 min in warm dip (80 to 85° F)	dip
	*Terraclor 75% WP	3 lb/4.85 gal	48 hours after digging	once–soak 5 min in 75% concentration	dip
		3.25 to 6.5 lb/ 100 sq ft	preplant	once	soil surface, mix in upper 6 to 7 inches
IVY	(See Appendix, p	pages 63-64, for p	hysiological problem	s.)	
Root Rot (general)	Banrot WP	6 to 12 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench

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Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
IVY,	Continued				
Root Rot (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
	and the state of t	2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	$2.5~\mathrm{lb/1,}000~\mathrm{sq}~\mathrm{ft}$	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
	Benlate DF	$0.66 \; \mathrm{lb}/100 \; \mathrm{gal}$	after transplant	every 2 to 4 wk	soil drench
Bacterial Leaf Spot	Kocide 101	1 lb/100 gal (1 Tbsp/gal)	at disease appearance	every 7 to 14 days	foliar spray, can dis- color leaves of some varieties
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
Fungal Leaf	Spots, no registered	chemical control			
Powdery Mildew	Bayleton 25 Turf & Ornamental (Grape Ivy only—Avoid extensive application)	winter: 1 oz/50 gal; summer: 2 oz/50 gal	at disease appearance	every 30 days	foliar spray
	**Milban EC (Grape Ivy only)	$32 ext{ fl oz}/100 ext{ gal}$	at disease appearance	every 10 to 14 days	foliar spray

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

^{**}Restricted Use Pesticides (RUP); formulations of these toxicants are available only to certified applicators.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
KA	LANCHOE (See Appendix, pa	ge 64, for physiologic	cal problems.)	, i. 3
Crown & Stem Rot general)	Banrot WP	6 to 12 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Crown & Stem Rot Pythium)	Truban 25% EC	4 to 8 oz/100 gal/ 400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench
Crown & Stem Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
Powdery Mildew	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	**Milban EC	32 fl oz/100 gal	at disease appearance	every 10 to 14 days	foliar sprav
Crown Gall	*Galltrol-A (bacterial inoculant)	1 plate:1 gal (unchlorinated)	preplant	once	dip
LAI	BELIA				la ch
Damping off general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation

1.25 lb/100 gal at 15 gal/1,000 sq ft

Captan 80 WP

preplant

once

soil drench

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**Restricted Use Pesticides (RUP); formulations of these toxicants are available only to certified applicators.

	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
1 5 .		in and the fraction was the second of the se			
	LIA, Continued				
Damping off (general)	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
Me Andrews		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
			at disease annearance		
Crown Rot (Sclerotinia)	Botran 75 W	5.33 lb/100 gal	at disease appearance	single application	soil drench
Crown Rot (Sclerotinia)					
Crown Rot (Sclerotinia) Grey Mold (Botrytis) Damping off	Botran 75 W	5.33 lb/100 gal 2.66 lb/100 gal/	at disease appearance	single application	soil drench foliar spray
Crown Rot (Sclerotinia) Grey Mold (Botrytis) Damping off	Botran 75 W Botran 75 W	5.33 lb/100 gal 2.66 lb/100 gal/ acre 0.2 to 0.4 lb/	at disease appearance	single application at transplant and when half mature	soil drench foliar spray
Crown Rot (Sclerotinia) Grey Mold (Botrytis) Damping off	Botran 75 W Botran 75 W Captan 50 W	5.33 lb/100 gal 2.66 lb/100 gal/ acre 0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at	at disease appearance at disease appearance preplant	single application at transplant and when half mature once	soil drench foliar spray dust, soil incorporation soil drench
Crown Rot (Sclerotinia) Grey Mold (Botrytis) Damping off	Botran 75 W Botran 75 W Captan 50 W Captan 80 WP	5.33 lb/100 gal 2.66 lb/100 gal/acre 0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/	at disease appearance at disease appearance preplant preplant	single application at transplant and when half mature once once	soil drench foliar spray dust, soil incorporation soil drench dust, soil incorporation
Crown Rot (Sclerotinia) Grey Mold (Botrytis) Damping off	Botran 75 W Botran 75 W Captan 50 W Captan 80 WP Orthocide 10	5.33 lb/100 gal/ acre 0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/	at disease appearance at disease appearance preplant preplant preplant	single application at transplant and when half mature once once once	soil drench foliar spray dust, soil incorporation soil drench dust, soil incorporation
Crown Rot (Sclerotinia) Grey Mold (Botrytis) Damping off	Botran 75 W Botran 75 W Captan 50 W Captan 80 WP Orthocide 10	5.33 lb/100 gal 2.66 lb/100 gal/acre 0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/1,000 sq ft 4 to 5 oz/1,000 sq ft 2 lb/100 gal at	at disease appearance at disease appearance preplant preplant preplant preplant	single application at transplant and when half mature once once once once	soil drench foliar spray dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench
Crown Rot (Sclerotinia) Grey Mold (Botrytis) Damping off	Botran 75 W Botran 75 W Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W	5.33 lb/100 gal 2.66 lb/100 gal/acre 0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft	at disease appearance at disease appearance preplant preplant preplant preplant preplant	single application at transplant and when half mature once once once once once once	soil drench foliar spray dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation
Crown Rot (Sclerotinia) Grey Mold (Botrytis) Damping off (general)	Botran 75 W Botran 75 W Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W	5.33 lb/100 gal 2.66 lb/100 gal/acre 0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/1,000 sq ft 4 to 5 oz/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 lb/1,000 sq ft	at disease appearance at disease appearance preplant preplant preplant preplant preplant preplant	single application at transplant and when half mature once once once once once once once	soil drench foliar spray dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation
Crown Rot (Sclerotinia) Grey Mold (Botrytis) Damping off (general) LIL Root Rot	Botran 75 W Botran 75 W Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 7.5 Orthocide 5	5.33 lb/100 gal 2.66 lb/100 gal/acre 0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/1,000 sq ft 4 to 5 oz/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 lb/1,000 sq ft	at disease appearance at disease appearance preplant preplant preplant preplant preplant preplant	single application at transplant and when half mature once once once once once once once	soil drench foliar spray dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation
Crown Rot (Sclerotinia) Grey Mold (Botrytis) Damping off (general)	Botran 75 W Botran 75 W Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 5.5 Orthocide 5	5.33 lb/100 gal 2.66 lb/100 gal/acre 0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/1,000 sq ft 4 to 5 oz/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/1,000 sq ft 6 to 12 oz/100 gal/400 sq ft	at disease appearance at disease appearance preplant preplant preplant preplant preplant preplant preplant preplant	single application at transplant and when half mature once once once once once once once onc	soil drench foliar spray dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation dust, soil incorporation

	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
LILIE	S, Continued				
Root Rot (Pythium)	Truban 5 G	10 oz/cu yd soil mix	preplant	once	soil incorporation
	Truban 25% EC	4 to 8 oz/100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench, use 0.25 rate after initial drenc
	Terrazole 35% WP	bedding plants: 2 to 3 oz/50 gal/ 400 sq ft	at seeding & at transplant	1 to 2 months	soil drench
		pot plants: 1.5 to 5 oz/50 gal (0.5 pt/6" pot)	after potting	every 2 to 3 months	soil drench
Root Rot (Rhizoctonia)	Benlate	1.33 lb/100 gal (2 Tbsp/gal)	preplant	once	dip
Penicillium & Fusarium)	Tersan 1991	1.66 lb/100 gal (2 Tbsp/gal)	preplant	once	dip
	Benomyl 50% WP	2 Tbsp/gal	preplant	once	dip (15 to 30 min)
	*Mertect 340-F	30 fl oz/100 gal	preplant	once	dip (15 to 30 min)
	*Terraclor 75	3.25 to 6.5 lb/ 1,000 sq ft	preplant	once	dust, on soil surface
		7.5% concentration (3 lb/4.85 gal)	preplant	once	dip bulbs for 5 min
	emical control avail				
MAI Damping off Lower Stem		te Appendix, page 4 to 8 oz/100 gal/ 800 sq ft	e 64, for physiolog at seeding & at transplant	gical problems.) every 4 to 8 wk	soil drench
MAI Damping off Lower Stem & Root Rot	RIGOLDS (Se	### Appendix, page 4 to 8 oz/100 gal/ 800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/	at seeding &		
MAI Damping off Lower Stem & Root Rot	RIGOLDS (Se	to 8 oz/100 gal/800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at	at seeding & at transplant	every 4 to 8 wk	
MAI Damping off Lower Stem & Root Rot	RIGOLDS (See	te Appendix, page 4 to 8 oz/100 gal/ 800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/ 1,000 sq ft	at seeding & at transplant	every 4 to 8 wk	dust, soil incorporation
MAI Damping off Lower Stem & Root Rot	RIGOLDS (See Banrot Captan 50 W Captan 80 WP	## Appendix, page 4 to 8 oz/100 gal/ 800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/	at seeding & at transplant preplant preplant	every 4 to 8 wk once	dust, soil incorporation soil drench dust, soil incorporation
MAI Damping off Lower Stem & Root Rot	RIGOLDS (See Banrot Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W	Appendix, page 4 to 8 oz/100 gal/ 800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft	at seeding & at transplant preplant preplant preplant	once once	dust, soil incorporation soil drench dust, soil incorporation
MAI Damping off Lower Stem & Root Rot	RIGOLDS (See Banrot Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W	4 to 8 oz/100 gal/800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 4 to 5 oz/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft	at seeding & at transplant preplant preplant preplant preplant preplant preplant preplant	once once once once	dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation
MAI Damping off Lower Stem & Root Rot	RIGOLDS (See Banrot Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W	Appendix, page 4 to 8 oz/100 gal/ 800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft	at seeding & at transplant preplant preplant preplant preplant preplant	once once once once once once	dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation
MAI Damping off Lower Stem & Root Rot (general) Damping off	RIGOLDS (See Banrot Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W	4 to 8 oz/100 gal/800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 4 to 5 oz/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft	at seeding & at transplant preplant preplant preplant preplant preplant preplant preplant	once once once once once once once	dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation
	RIGOLDS (See Banrot Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 5.5 Orthocide 5 Subdue 2E	4 to 8 oz/100 gal/800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 4 to 5 oz/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2 lb/100 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/1,000 sq ft 0.25 to 0.5 fl oz/	at seeding & at transplant preplant preplant preplant preplant preplant preplant preplant preplant	once once once once once once once once	dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench
MAI Damping off Lower Stem & Root Rot (general) Damping off	RIGOLDS (See Banrot Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 50 W	4 to 8 oz/100 gal/800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 4 to 5 oz/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 0.5 to 2 fl oz/100 gal/800 sq ft 0.5 to 2 fl oz/	at seeding & at transplant preplant preplant preplant preplant preplant preplant preplant at planting	once once once once once once once once	dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation soil drench

*Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
	-				
MAR	IGOLDS, Continued				
Damping off (Pythium)	Truban 25 EC	3 to 4 oz/100 gal/ 800 sq ft	at seeding & at transplant	every 4 to 8 wk	soil drench
1411	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Damping off Root Rot (<i>Rhizoctonia</i>)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
N District of the		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray, use only of African marigolds, not French marigolds
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
t dan kadak beta	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 2 wk	dust (fumigant)
Fusarium Wil	t, no effective chemi	cal control			
Bacterial Lea	f Spot (Pseudomonas	s), no effective che	mical control		
Aster Yellows	, control leafhopper				
NA	STURTIUM				
Bacterial Lea	f Snot (Providement	s), no effective che	mical control		
Sacreman Lica.	1 Spot (1 seadomonas	b), no circuive che	inical control		
	Spot, no registered of		inical control		
Fungal Leaf S		hemical control			
Fungal Leaf S Beet Curly To	Spot, no registered o	hemical control			
Fungal Leaf S Beet Curly To Tomato Spott	Spot, no registered cop Virus, no effective	hemical control e chemical control V), no effective c			
Fungal Leaf S Beet Curly To Tomato Spott Aster Yellows	Spot, no registered cop Virus, no effectived Wilt Virus (TSW	hemical control e chemical control V), no effective c			
Fungal Leaf S Beet Curly To Tomato Spott Aster Yellows NE Damping off, Boot & Stem	Spot, no registered cop Virus, no effectived Wilt Virus (TSW), best control is to co	hemical control e chemical control V), no effective c	hemical control	once	dust, soil incorporation
Fungal Leaf S Beet Curly To Tomato Spott Aster Yellows NE Damping off, Root & Stem Rot	Spot, no registered cop Virus, no effectived Wilt Virus (TSW), best control is to copper the control of the copper than the compensation of the control of the copper than the	hemical control e chemical control V), no effective control leafhopper 0.2 to 0.4 lb/	hemical control	once Once	dust, soil incorporation
Fungal Leaf S Beet Curly To Tomato Spott Aster Yellows NE Damping off, Root & Stem Rot	Spot, no registered cop Virus, no effectived Wilt Virus (TSW), best control is to cophrhytis Captan 50 W	hemical control e chemical control V), no effective control leafhopper 0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at	hemical control		soil drench
Fungal Leaf S Beet Curly To Tomato Spott Aster Yellows	Spot, no registered cop Virus, no effectived Wilt Virus (TSW), best control is to cophrate Captan 50 W Captan 80 WP	hemical control e chemical control (V), no effective control leafhopper 0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/	hemical control preplant preplant	once	dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
NEDL	ITHYTIS, Continue	d			
Damping off	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
Root & Stem Rot (general)	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off,	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
Root & Stem Rot (Pythium)	Truban 30% WP	bedding plants: 4 to 6 oz/100 gal (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
		pot plants: 3 to 10 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Truban 25% EC	4 to 8 oz/100 gal (1 gal/8 sq ft)	at planting	every 2 to 3 months	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Damping off,	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
Root & Stem Rot (Rhizoctonia)		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
(1mizocionia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
M	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
ON	ION				70
Damping off (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
um Ma	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
ORO	CHID (See App	endix, page 64, fo	or physiological pro	blems.)	
Black Root	Truban 5 G	10 oz/cu yd of soil	preplant	once	soil incorporation
(Pythium)	Truban 30% WP	3 to 10 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
Leaf Blight (I	Phytophthora), no re		control		
Viruses, best	control is using dise	ase-free material	2.23		
CALL PROPERTY AND ADDRESS OF THE PARTY OF TH	hemical control				At a second

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Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
PAC	CHYSANDRA				
Stem Rot	*Fore	2 lb/50 gal/ 5,000 sq ft	at disease appearance	5 sprays, every 10 to 14 days	foliar spray
	Kocide 101	1 lb/100 gal	at disease appearance	every 7 days	soil drench
Leaf Blight	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray
62	Kocide 101	1 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
PAN	NSIES				
Damping off (general)	Banrot	4 to 8 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off (Pythium)	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft	at planting	every 6 wk	soil drench
(r ginium)		(1 pt/sq ft)			
		0.5 to 2 fl oz/ 100 gal/800 sq ft	at transplant	every 1 to 2 months	soil drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	4 to 6 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Truban 25% EC	3 to 4 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 II rate at seeding
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
PANS	SIES, Continued				
Powdery Mildew	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Anthracnose	Zyban	$1.5 \mathrm{lb}/100 \; \mathrm{gal}$	at disease appearance	weekly	foliar spray
and other Fungal Leaf Spots	*Fore	1.5 lb/100 gal (1.5 Tbsp/gal)	at disease appearance	every 7 to 10 days	foliar spray
Grey Mold	Chipco 26019	1 to 2 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
(Botrytis)	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Downy Milde	ew, no registered ch	emical control			
PEI	PEROMIA				
Root & Crown Rot (general)	Banrot WP	6 to 12 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root & Crown Rot (Pythium)	Subdue 2E	0.4 to 1.2 fl oz/ 100 gal/400 to 800 sq ft (1 to 2 pt/sq ft)	at planting	every 2 to 3 months	soil drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30 WP	8 to 12 oz/ 100 gal/400 sq ft	at planting	every 2 to 3 months	soil drench
	Truban 25% EC	4 to 8 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Terrazole 35% WP	bedding plants: 2 to 3 oz/50 gal/ 400 sq ft	at seeding & at transplant	1 to 2 months	soil drench
		pot plants: 1.5 to 5 oz/50 gal (0.5 pt/6" pot)	after planting	every 2 to 3 months	soil drench

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Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
PEPE	ROMIA, Continued	ł			
Root & Crown Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench, use 0.25 l rate after initial drenc
Root & Crown Rot	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
(Rhizoctonia)	Benlate DF	$0.66 \; \mathrm{lb}/100 \; \mathrm{gal}$	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Spot, no registered cot be controlled che	hemical control	se-free stock		
Viruses, canno		hemical control	se-free stock		
Viruses, canno	ot be controlled che	hemical control	se-free stock preplant	once	dust, soil incorporation
Viruses, canno	PPERS	chemical control mically—use diseas 0.2 to 0.4 lb/		once	dust, soil incorporation
Viruses, canno	PPERS Captan 50 W	0.2 to 0.4 lb/1,000 sq ft	preplant		soil drench
Viruses, canno	PPERS Captan 50 W Captan 80 WP	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/	preplant preplant	once	soil drench
Viruses, canno	PPERS Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft	preplant preplant preplant	once	soil drench dust, soil incorporation dust, soil incorporation soil drench
Viruses, canno	PPERS Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at	preplant preplant preplant preplant	once once	soil drench dust, soil incorporation dust, soil incorporation soil drench
Viruses, canno	PPERS Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft	preplant preplant preplant preplant preplant	once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation
PEF Damping off (general) Bacterial Leaf	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 5 Orthocide 5	0.2 to 0.4 lb/1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 4 to 5 oz/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2 lb/100 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2 lb/100 sq ft 2.5 lb/1,000 sq ft 2.5 lb/1,000 sq ft	preplant preplant preplant preplant preplant preplant	once once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation
PEF Damping off (general) Bacterial Leaf	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 5 Orthocide 5	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft	preplant preplant preplant preplant preplant preplant preplant	once once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation
PEF Damping off (general)	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 5 Spot, no effective of Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft chemical control 0.2 to 0.4 lb/ 1,000 sq ft	preplant preplant preplant preplant preplant preplant preplant preplant preplant	once once once once once	dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation dust, soil incorporation
PEF Coot Rot	Captan 50 W Captan 80 WP Orthocide 10 Orthocide 50 W Orthocide 5 Orthocide 5	0.2 to 0.4 lb/ 1,000 sq ft 1.25 lb/100 gal at 15 gal/1,000 sq ft 1.25 to 2 lb/ 1,000 sq ft 4 to 5 oz/ 1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2 lb/100 gal at 15 gal/1,000 sq ft 2.5 lb/1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft 2.5 to 4 lb/ 1,000 sq ft	preplant preplant preplant preplant preplant preplant preplant	once once once once once once once	soil drench dust, soil incorporation dust, soil incorporation soil drench dust, soil incorporation dust, soil incorporation

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	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
PERI	WINKLE, Continue	ed i			. Ar
Root Rot (general)	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	drench, use 0.25 lb rat on newly seeded areas
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold	Benlate	0.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
(Botrytis)	Benlate DF				
	Benomyl 50% WP			every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Fungal Leaf Spots	Kocide 101	1 lb/100 gal	at disease appearance	every 7 to 10 days	foliar spray
PET	TINIA (See Am	nendir nage 64	for physiological pro	blems.)	
	ONIA (See Ap	penaix, page 01,			
Grey Mold	Ornalin (See Ap	thocide 50 W	foliar spray		
Grey Mold		0.75 to 1 lb/ 100 gal	at disease appearance		foliar spray
Grey Mold	Ornalin	0.75 to 1 lb/ 100 gal 1.5 lb/100 gal	at disease appearance	every 7 days	
Grey Mold	Ornalin Zyban Daconil 2787 (W-75) Benlate	0.75 to 1 lb/ 100 gal 1.5 lb/100 gal 1.5 lb/100 gal 0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance at disease appearance at disease appearance	every 7 days every 7 to 14 days	foliar spray foliar spray
Grey Mold	Ornalin Zyban Daconil 2787 (W-75) Benlate Benlate DF	0.75 to 1 lb/ 100 gal 1.5 lb/100 gal 1.5 lb/100 gal 0.5 lb/100 gal (1 Tbsp/2 gal) 0.33 lb/100 gal	at disease appearance at disease appearance at disease appearance at disease appearance	every 7 days every 7 to 14 days every 10 to 14 days every 10 to 14 days	foliar spray foliar spray foliar spray
Grey Mold	Ornalin Zyban Daconil 2787 (W-75) Benlate	0.75 to 1 lb/ 100 gal 1.5 lb/100 gal 1.5 lb/100 gal 0.5 lb/100 gal (1 Tbsp/2 gal) 0.33 lb/100 gal 1 Tbsp/2 gal	at disease appearance	every 7 days every 7 to 14 days every 10 to 14 days every 10 to 14 days	foliar spray foliar spray foliar spray
Grey Mold	Ornalin Zyban Daconil 2787 (W-75) Benlate Benlate DF Benomyl 50% WP Tersan 1991	0.75 to 1 lb/ 100 gal 1.5 lb/100 gal 1.5 lb/100 gal 0.5 lb/100 gal (1 Tbsp/2 gal) 0.33 lb/100 gal 1 Tbsp/2 gal	at disease appearance	every 7 days every 7 to 14 days every 10 to 14 days	foliar spray foliar spray foliar spray foliar spray foliar spray foliar spray
Grey Mold	Ornalin Zyban Daconil 2787 (W-75) Benlate Benlate DF Benomyl 50% WP	0.75 to 1 lb/ 100 gal 1.5 lb/100 gal 1.5 lb/100 gal 0.5 lb/100 gal (1 Tbsp/2 gal) 0.33 lb/100 gal 1 Tbsp/2 gal 0.5 lb/100 gal	at disease appearance	every 7 days every 7 to 14 days every 10 to 14 days every 10 to 14 days every 10 to 14 days	foliar spray foliar spray foliar spray foliar spray
Grey Mold (Botrytis) Damping off, Crown and Root Rot	Ornalin Zyban Daconil 2787 (W-75) Benlate Benlate DF Benomyl 50% WP Tersan 1991	0.75 to 1 lb/ 100 gal 1.5 lb/100 gal 1.5 lb/100 gal 0.5 lb/100 gal (1 Tbsp/2 gal) 0.33 lb/100 gal 1 Tbsp/2 gal 0.5 lb/100 gal	at disease appearance	every 7 days every 7 to 14 days every 10 to 14 days	foliar spray foliar spray foliar spray foliar spray foliar spray foliar spray
Damping off, Crown and Root Rot (general)	Ornalin Zyban Daconil 2787 (W-75) Benlate Benlate DF Benomyl 50% WP Tersan 1991 Exotherm Termil	0.75 to 1 lb/ 100 gal 1.5 lb/100 gal 1.5 lb/100 gal 0.5 lb/100 gal (1 Tbsp/2 gal) 0.33 lb/100 gal 1 Tbsp/2 gal 0.5 lb/100 gal (1 Tbsp/2 gal) 4 to 8 oz/ 100 gal/800 sq ft	at disease appearance	every 7 days every 7 to 14 days every 10 to 14 days every 2 wk	foliar spray dust (fumigant)
Grey Mold (Botrytis) Damping off, Crown and Root Rot	Ornalin Zyban Daconil 2787 (W-75) Benlate Benlate DF Benomyl 50% WP Tersan 1991 Exotherm Termil Banrot	0.75 to 1 lb/ 100 gal 1.5 lb/100 gal 1.5 lb/100 gal 0.5 lb/100 gal (1 Tbsp/2 gal) 0.33 lb/100 gal 1 Tbsp/2 gal 0.5 lb/100 gal (1 Tbsp/2 gal) 4 to 8 oz/ 100 gal/800 sq ft (1 gal/8 sq ft) 0.2 to 0.4 lb/	at disease appearance	every 7 days every 7 to 14 days every 10 to 14 days every 2 wk every 4 to 8 wk	foliar spray foliar spray foliar spray foliar spray foliar spray foliar spray dust (fumigant) soil drench

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
PETU	NIA, Continued				
Damping off, Crown &	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (general)		2 lb/100 gal/ 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
(Pythium)	Truban 25 EC	3 to 4 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
and the state of t	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench, soil incorporation

Alternaria Leaf Spot, no registered chemical control

PHILODENDRON (See Appendix, page 64, for physiological problems.)

Damping off (general)	Banrot WP	pot plants: 6 to 12 oz/ 100 gal/400 sq ft	at planting	every 2 to 3 months	soil drench
	Banrot	bedding plants: 4 to 8 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at planting & at transplant	every 4 to 8 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
	16 1명 인경보 등의 -	2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off (Pythium)	Subdue 2E	0.4 to 2 fl oz/ 100 gal (1 to 2 pt/6" pot)	at planting	every 2 to 3 months	soil drench
	Truban 5G	5 oz/cu yd of soil	preplant	once	soil incorporation
*Materials comn	nercially used in gree	nhouses, but not uet le	gally registered for green	house use.	

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
PHIL	ODENDRON, Con	tinued			
Damping off (Pythium)	Truban 30% WP	8 to 12 oz/ 100 gal/400 sq ft	at planting	every 2 to 3 months	soil drench
	Terrazole 35% WP	bedding plants: 2 to 3 oz/50 gal/ 400 sq ft	at seeding & at transplant	1 to 2 months	soil drench
		pot plants: 1.5 to 5 oz/50 gal (0.5 pt/6" pot)	after potting	every 2 to 3 months	soil drench
	Truban 25% EC	4 to 8 oz/ 100 gal/400 sq ft	at planting	every 2 to 3 months	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench, use 0.25 ll rate after initial drench
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Bacterial Leaf Spot	Kocide 101	1 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray, use in conjunction with maneb azinc, 1.2 lbs/100 gal
PHI	ωx			1.00	
Powdery	Actidione PM	5 Tbsp/gal	at disease appearance	weekly	foliar spray
Mildew	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray
Damping off (general)	Banrot WP	4 to 8 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
Damping off Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Damping off	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Rhizoctonia)		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
PHI	OX, Continued				
Damping off	Benomyl 50% WP	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
Root Rot (Rhizoctonia)	Benlate DF	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
PIL	EA (See Appen	dix, page 64, for	physiological probler	ns.)	
Damping off Root Rot (general)	Banrot WP	6 to 12 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
1771 - 178 2271 - 1785 - 1785 - 1785 - 1785 - 1785 - 1785 - 1785 - 1785 - 1785 - 1785 - 1785 - 1785 - 1785 - 1785 - 1785	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
Root Rot (Pythium)	Truban 30 WP	8 to 12 oz/ 100 gal/400 sq ft	at planting	every 2 to 3 months	soil drench
	Truban 25% EC	4 to 8 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Terrazole 35% WP	bedding plants: 2 to 3 oz/50 gal/ 400 sq ft	at seeding & at transplant	1 to 2 months	drench
		pot plants: 1.5 to 5 oz/50 gal (0.5 pt/6" pot)	after planting	every 2 to 3 months	drench
	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench
Damping off Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
PILE	A, Continued				
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
POI	NSETTIA (S	See Appendix, pag	ge 64, for physiologic	cal problems.)	
Root Rot (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, work into top 3 to 4 inches of soil
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, work into top 3 to 4 inches of soil
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, work into top 3 to 4 inches of soil
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, work into top 3 to 4 inches of soil
	Orthocide 5	2.25 to 4 lb/ 1,000 sq ft	preplant	once	dust, work into top 3 to 4 inches of soil
Root Rot (Pythium & Phytophthora	Subdue 2E	0.5 to 2 fl oz/ 100 gal/400 to 800 sq ft (0.5 pt/6" pot)	at potting	reapply after 6 wk	drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	mix granules with soil
	Truban 30%	3 to 10 oz/ 100 gal/400 sq ft	at potting	reapply at 4 to 12 wk intervals	soil drench
	Truban 25% EC	4 to 8 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at potting	make only one application at 0.5 lb rate. Use 0.25 lb rate at 2 to 4 wk intervals thereafter.	soil drench
	Phaltan 50 W	2 lb + spreader/ 100 gal (1 pt/8" pot)	at planting	10 days	soil drench
	Folpet 50 WP	2 lb + spreader/ 100 gal (1 pt/8" pot)	at planting	10 days	drench
Root Rot	*Terraclor 75%	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
(Rhizoctonia)		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at potting	every 2 to 4 wk	soil drench or heavy spray

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
POINS	ETTIA, Continued				
Root Rot	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
(Rhizoctonia)	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at potting	every 2 to 4 wk	soil drench or heavy spray
	Benomyl 50% WP	1 Tbsp/gal	at potting	every 2 to 4 wk	soil drench or heavy spray
	Banrot WP	6 to 12 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at potting	4 to 12 wk interval	soil drench
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray until drip
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days. Shorten to 7 days	foliar spray
				when conditions favor disease development.	
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days. Shorten to 7 days	foliar spray
				when conditions favor disease development.	
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days. Shorten to 7 days when conditions	foliar spray
				favor disease development.	
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
Bacterial Stem	Rot, no effective ch	nemical control			
Temik Tip Bur	n, (Apply Temik a	ccording to label)			
POR	TULACA				
Damping off (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant and the second	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
	[1] 《基本公司》 [1]	2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
		0 F 11- /1 000 (+	preplant	once	dust, soil incorporation
1000 (1000 (1000) 1000 (1000) 1000 (1000)	Orthocide 7.5	2.5 lb/1,000 sq ft			
	Orthocide 7.5 Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off		2.5 to 4 lb/	preplant preplant	once	dust, soil incorporation
Damping off (Pythium)	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft			

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks



PRIMULA (See Appendix, page 64, for physiological problems.)

Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	When conditions for disease development prevail	every 10 to 14 days	foliar spray until drip
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Bacterial Leaf	Spot, no registered	chemical control			
Anthracnose	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	1 lb/100 gal (1 Tbsp/1 gal)	at disease appearance	every 10 to 14 days	foliar spray
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench or heavy spray
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench or heavy spray
	*Terraclor 75%	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	at planting	once	soil drench
Root Rot (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Lesan 35 WP	pot plants: 0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench, use 0.25 lb rate after initial drench
		bedding plants: 0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench

Rust, no registered chemical control

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease Material Formulated Rate When To Apply Frequency How To Apply, Remarks



RIEGER BEGONIA (See Appendix, page 64, for physiological problems.)

Root Rot (general)	Banrot WP	6 to 12 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 12 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant property and	once the second second	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
Crown Rot (Pythium)	Truban 30% WP	3 to 10 oz/100 gal (0.5 pt/6" pot)	at transplant	every 4 to 12 wk if necessary	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	at transplant	every 2 to 4 wk	soil drench
Root Rot Crown Rot	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
(Rhizoctonia)	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
an e santa North S	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	<u> </u>	2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis) Blight	Ornalin	0.75 to 1 lb/ 100 gal	When favorable weather conditions prevail	every 10 to 14 days	foliar spray until drip
Stem Rot	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
_	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 2 wk	dust (fumigant)
Powdery Mildew	Karathane WD	4 to 6 oz/100 gal (2 Tbsp/12.5 gal)	at disease appearance	every 7 to 10 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
- 1865 - 1865	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Actidione PM	5 Tbsp/gal	at disease appearance	every 7 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
•	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray

Bacterial Leaf Spot, no effective chemical control

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.



ROSE (See Appendix, page 65, for physiological problems.)

Powdery Mildew	Bayleton 25 Turf & Ornamental	winter: 1 oz/50 gal; summer: 2 oz/50 gal	at disease appearance	every 30 days	foliar spray, excess rate may shorten flower stalks
	**Milban	32 oz/100 gal	at disease appearance	every 10 to 14 days	foliar spray to drip, sensitivity on some varieties
	Benlate	0.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Karathane WP	4 to 6 oz/100 gal (2 Tbsp/3 gal)	at disease appearance	every 5 to 7 days	foliar spray, do not apply at temperatures over 90°F.
	Actidione PM	2 Tbsp/gal Rambler: 5 Tbsp/ gal; 1 Tbsp/gal as protectant	at disease appearance	every 7 days	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Triforine EC	10 to 12 fl oz/ 100 gal	at disease appearance	every 7 to 10 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	$0.5 \mathrm{lb}/100 \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Kocide 101	1 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
Grey Mold	Chipco 26019	1 to 2 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
(Botrytis)	Daconil 2787	1 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Daconil 2787 F	1.5 pt/100 gal	at bud break	every 7 to 14 days	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	every 7 days	foliar spray
	Benlate	0.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	$0.5 \mathrm{lb}/100 \; \mathrm{gal}$	at disease appearance	every 10 to 14 days	foliar spray
	Botran 75 W	0.5 to 0.75 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
Black Spot	Daconil 2787	1 lb/100 gal	at disease appearance	every 7 to 10 days	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	every 7 days	foliar spray
	Captan 50 W	2 lb/100 gal	at disease appearance	every 7 to 10 days	foliar spray
	Captan 50 WP	8 teaspoons/gal	at disease appearance	every 7 to 10 days	foliar spray
	Captan 80 WP	$1.25~\mathrm{lb}/100~\mathrm{gal}$	at disease appearance	every 7 to 14 days	foliar spray
	Kocide 101	1 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	at disease appearance	every 10 to 14 days	
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
Crown Gall	Galltrol-A (bacterial inoculant)	1 plate:gal (unchlorinated)	preplant		dip once

Cankers (Coniothryium & others) no registered chemical control

^{**}Restricted Use Pesticides (RUP); formulations of these toxicants are available only to certified applicators.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
C					
ROSE	E, Continued				
Rust	*Dithane Z-78	0.5 lb/100 gal (1 Tbsp/gal)	at disease appearance	every 7 days	foliar spray
	Actidione PM	2 Tbsp/gal Rambler: 5 Tbsp/gal	at disease appearance	every 7 to 10 days	foliar spray
SAI	LVIA (See App	endix, page 65, fo	or physiological prob	lems.)	
Damping off Root Rot (general)	Banrot WP	4 to 8 oz/100 gal/ 800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off Root Rot	Subdue 2E	0.5 to 2 fl oz/ 100 gal/800 sq ft	at transplant	every 1 to 2 months	soil drench
(Pythium)		0.25 to 0.5 fl oz/ 100 gal/800 sq ft (1 pt/sq ft)	at planting	every 6 wk	soil drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	4 to 6 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Truban 25% EC	3 to 4 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 lb rate at seeding
Damping off Root Rot	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
(Rhizoctonia)	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold (Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
SALV	IA, Continued				
Grey Mold	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
(Botrytis)	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Powdery Mildew	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
SCI	HEFFLERA				
Root Rot (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Lesan 35 WP	bedding plants: 0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
		pot plants: 0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench, use 0.25 ll rate after initial drench
	Subdue 2E	0.4 to 1.2 fl oz/ 100 gal/400 to 800 sq ft (1 to 2 pt/sq ft)	at planting	every 2 to 3 months	soil drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Oedema, best control is to reduce watering in cool, cloudy weather

Disease Material Formulated Rate When To Apply Frequency How To Apply, Remarks



SNAPDRAGON

Damping off (general)	Banrot	4 to 8 oz/ 100 gal/800 sq ft	at seeding & at transplant	every 4 to 8 wk	soil drench
•		(1 gal/8 sq ft)			
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1.000 sq ft	preplant	once	dust, soil incorporation
Damping off (Pythium)	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft (1 pt/sq ft)	at planting	every 6 wk	soil drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30% WP	4 to 6 oz/	at seeding &	every 4 to 8 wk	soil drench
		100 gal/800 sq ft (1 gal/8 sq ft)	at transplant		
	Truban 25% EC	3 to 4 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Damping off	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
(Rhizoctonia)		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
Rust	*Fore	1.5 lb/100 gal (0.5 Tbsp/gal)	at disease appearance	every 7 to 10 days	foliar spray
	*Dithane M-22	1.5 lb/100 gal (1.5 Tbsp/gal)	at disease appearance	every 7 to 10 days	foliar spray
Powdery Mildew	Karathane WD	4 to 6 oz/100 gal (2 Tbsp/12.5 gal)	at disease appearance	every 7 to 10 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray

Verticillium Wilt, no effective chemical control

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks



STATICE

Root Rot Crown Rot (general)	Banrot WP	6 to 12 oz/ 100 gal/400 sq ft (0.5 pt/6" pot)	at planting	every 4 to 8 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1,25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/100 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot Crown Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Root Rot Crown Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Grey Mold	Chipco 26019	1 to 2 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
(Botrytis)	Ornalin	0.75 to 1 lb/ 100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Daconil 2787 (W-75)	1.5 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Daconil 2787 F	1.5 pt/100 gal	at bud break	every 7 to 14 days	foliar spray
	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
Fungal	Daconil 2787 F	1.5 pt/100 gal	at bud break	every 7 to 14 days	foliar spray
Leaf Spots	Daconil 2787 (W-75)	1.5 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray

Aster Yellows, best control is to control leaf hoppers



Bacterial Rot (Xanthomonas), no effective chemical control

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

-	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
STO	CK, Continued				
Damping off Root Rot	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
(general)	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/100 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off (Pythium)	Lesan 35 WP	0.25 to 0.5/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 li rate at seeding
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	drench
Downy Milde	ew, no registered che	emical control			
Grey Mold (Botrytis)	Benlate	0.5 lb/100 gal (1 to 2 pt/sq ft)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
			. 1.	weekly	foliar spray
	Zyban	1.5 lb/100 gal	at disease appearance	weekly	- oran
	Zyban Zyban	1.5 lb/100 gal 1.5 lb/100 gal	at disease appearance	weekly	foliar spray
Leaf Spot		1.5 lb/100 gal		7	
Leaf Spot Club Root, no	Zyban	1.5 lb/100 gal		7	
White Rust, 1	Zyban o effective chemical	1.5 lb/100 gal control l control		7	
Leaf Spot Club Root, no White Rust, 1 Verticillium V	Zyban o effective chemical no effective chemica	1.5 lb/100 gal control l control emical control		7	
Leaf Spot Club Root, no White Rust, no Verticillium V	Zyban o effective chemical no effective chemica Wilt, no effective ch	1.5 lb/100 gal control l control emical control		7	
Leaf Spot Club Root, no White Rust, no Verticillium V STF Fusarium Ste	Zyban o effective chemical no effective chemical Wilt, no effective che RAWFLOWE m Rot, no effective	1.5 lb/100 gal control l control emical control		weekly	
Leaf Spot Club Root, no White Rust, 1 Verticillium V STF Fusarium Ste Aster Yellows	Zyban Deffective chemical no effective chemical Wilt, no effective chemical Wilt, no effective chemical RAWFLOWEI m. Rot, no effective pest control is to control is control is to control is to control is	1.5 lb/100 gal control l control emical control chemical control ontrol leafhopper;	at disease appearance	weekly	

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
SUCC	ULENTS, Continu	ed			
Root Rot (general)	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
		0.25 to 0.5 lb/ 100 gal (0.5 pt/6" pot)	at planting	every 2 to 4 wk	soil drench, use 0.25 ll rate after initial drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Powdery Mildew	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
TOM	IATOES (See	Appendix, page	65, for physiological	problems.)	
Damping off (general)	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	$1.25 \mathrm{lb} / 100 \mathrm{gal} \mathrm{at}$ $15 \mathrm{gal} / 1,000 \mathrm{sq} \mathrm{ft}$	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
					soil drench

*Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
TOMA	ATOES, Continued	A secondary of the seco		r gent riss gar	
Damping off, (Rhizoctonia)	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
Grey Mold	Exotherm Termil		at disease appearance	every 2 wk	dust (fumigant)
(Botrytis)	Botran 75 W	1 lb/100 gal	at disease appearance	weekly	foliar spray from ground up
-	Benlate DF	0.33 to 0.66 lb/ 100 gal	at disease appearance	every 14 days	foliar spray
TUL Grey Mold	Ornalin (See Appe		physiological proble		foliar spray
(Botrytis)			ar assess appearance		
Viruses, no che	emical control; use	disease-free plant	material		
VEF	RBENA				. 15 mg . 15 mg
Damping off (general)	Banrot WP	4 to 8 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off (Pythium)	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft (1 pt/sq ft)	at planting	every 6 wk	soil drench
•	Truban 5 G	5 oz/cu vd of soil	preplant	once	soil incorporation
	Truban 30% WP	4 to 6 oz/100 gal (1 gal/8 sq ft)	at planting & at transplant	every 4 to 8 wk	soil drench
	Truban 25% WP	3 to 4 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at planting	every 4 to 8 months	soil drench
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	$0.66~\mathrm{lb}/100~\mathrm{gal}$	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/	preplant	once	soil drench

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remark
VERI	BENA, Continued				
Grey Mold	Zyban	1.5 lb/100 gal	at disease appearance	every 7 days	foliar spray
(Botrytis), Powdery Mildew	Benlate	0.5 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Exotherm Termil		at disease appearance	every 14 days	dust (fumigant)
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
VIN	ICA				
Damping off Root Rot	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporatio
(general)	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporatio
	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporatio
		2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	2.5 lb/1,000 sq ft	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Root Rot (Pythium)	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft (1 pt/sq ft)	at planting	every 6 wk	soil drench
		0.5 to 2 fl oz/ 100 gal/800 sq ft	at transplant	every 1 to 2 months	soil drench
	Truban 5 G	5 oz/cu yd of soil	preplant	once	soil incorporation
	Truban 30 WP	4 to 6 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Truban 25 EC	3 to 4 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench
Root Rot (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Benlate DF	$0.66 \mathrm{lb}/100 \mathrm{gal}$	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporatio
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
ZIN	NIAS				
Damping off Stem Rot (general)	Banrot	4 to 8 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench

Disease	Material	Formulated Rate	When To Apply	Frequency	How To Apply, Remarks
and the second s					
	IAS, Continued				
Damping off Stem Rot	Captan 50 W	0.2 to 0.4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
(general)	Captan 80 WP	1.25 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 10	1.25 to 2 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
nde Statistica Statistica Interna	Orthocide 50 W	4 to 5 oz/ 1,000 sq ft	preplant	once	dust, soil incorporation
	gine en 1900 ingen op de som en 1900. De	2 lb/100 gal at 15 gal/1,000 sq ft	preplant	once	soil drench
	Orthocide 7.5	$2.5 \mathrm{lb} / 1,000 \mathrm{sq} \mathrm{ft}$	preplant	once	dust, soil incorporation
	Orthocide 5	2.5 to 4 lb/ 1,000 sq ft	preplant	once	dust, soil incorporation
Damping off (Pythium)	Subdue 2E	0.25 to 0.5 fl oz/ 100 gal/800 sq ft (1 pt/sq ft)	at planting	every 6 wk	soil drench
	Truban 5 G	5 oz/cu vd of soil	preplant	once	soil incorporation
	Truban 30% WP	4 to 6 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
	Truban 25% EC	3 to 4 oz/ 100 gal/800 sq ft (1 gal/8 sq ft)	at seeding & at transplant	every 4 to 8 wk	soil drench
4870 (1804)	Lesan 35 WP	0.25 to 0.5 lb/ 50 gal/400 sq ft	newly seeded areas	every 2 to 4 wk	soil drench, use 0.25 lb rate at seeding
Damping off (Rhizoctonia)	Benlate	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench, possible phytotoxicity on some varieties
	Benlate DF	0.66 lb/100 gal	after transplant	every 2 to 4 wk	soil drench
	Benomyl 50% WP	1 Tbsp/gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	Tersan 1991	1 lb/100 gal (1 to 2 pt/sq ft)	at planting	every 2 to 4 wk	soil drench
	*Terraclor 75	2 lb/1,000 sq ft	preplant	once	dust, soil incorporation
		2.5 lb/300 gal/ 1,000 sq ft	preplant	once	soil drench
Powdery	Actidione PM	5 Tbsp/gal	at disease appearance	weekly	foliar spray
Mildew	Benlate	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Benlate DF	0.33 lb/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	**Milban EC	32 fl oz/100 gal	at disease appearance	every 10 to 14 days	foliar spray
	Benomyl 50% WP	1 Tbsp/2 gal	at disease appearance	every 10 to 14 days	foliar spray
	Tersan 1991	0.5 lb/100 gal (1 Tbsp/2 gal)	at disease appearance	every 10 to 14 days	foliar spray
	Daconil 2787 (W-75)	1.5 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
	Daconil 2787 F	1.5 pt/100 gal	at bud break	every 7 to 14 days	foliar spray
• ***	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray
Alternaria Leaf Spot	Daconil 2787 (W-75)	1.5 lb/100 gal	at disease appearance	every 7 to 14 days	foliar spray
-	Zyban	1.5 lb/100 gal	at disease appearance	weekly	foliar spray

^{*}Materials commercially used in greenhouses, but not yet legally registered for greenhouse use.
**Restricted Use Pesticides (RUP); formulations of these toxicants are available only to certified applicators.

APPENDIX — Plant Physiological Problems.

	Symptoms	Cause	Control
AFRICAN VIOLETS	Brown spots on leaves or ring spots	cold water	use tepid water
	pale green leaves, long stalks, leaf edges curled	cold temperature	minimum 60°F
	bleach, burn on foliage	high light	shade in summer; 800 to 11,000 fc idea
	yellowing leaves	low humidity	raise the humidity
ANTHERIUM	yellow leaf edges, brown leaf tips, curled foliage	cold, dry air	minimum 60°F in winter; keep humidity
APHELANDRA	leaf drop	cold, dry air	keep moist, minimum 55°F in winter
	brown leaf tips	low humidity	mist, keep humidity up
ARALIA	shriveled leaves	high light, low humidity	shade in summer, raise humidity
	yellowing leaves, leaf drop	overwatering	watch watering
	pale spotted leaves, brown	underwatering	watch watering
	brittle leaf edges	underwatering	water watering
	yellowing leaves, leaf drop	high temperature	avoid temperatures above 70°F
AZALEA	leaf drop	overwatering, under- watering, poor drainage, nutrient deficiency	correct watering, use well drained soil and use NPK 3:1:1 at 200 ppm N and I watering between each fertilization
	chlorosis	iron deficiency, too wet, cold	temperature 65°F, watch watering, use iron chelates
	foliage burn	high soluble salts, nematodes	watch soluble salts
CACTI	excess elongation, malformed	low light in summer or warm winter	maintain 50-55°F winter, need greater light intensity in the summer
	shriveled stem, tip rot below	overwatering in winter	decrease water in winter, keep on dry side
CHRYSANTHEMUM	crown bud	not enough short days, high temperatures, low light, cuttings too long	apply proper conditions for flowering for the variety
	neckiness	stem below bud elongated	use B-9, 1 to 3 days after disbud
	yellow top leaves	pH too high	keep pH at 6.2 to 6.4
	yellow leaves	cutting held too long, high soluble salts	maintain proper fertilization, plant cuttings quickly
CYCLAMEN	yellowing foliage	hot, dry air, underwater- ing, high light	keep 62 to 64°F. at night, shade in summer: 1,000 fc maximum, water correctly
	crown soft, plant collapses	overwatering, corm planted too deeply	plant corm with top showing, water correctly
DAFFODIL	bud abortion at gooseneck stage	bullnose	force bulbs at 61 to 63°F
DIEFFENBACHIA	wilted, yellow, lower leaves	low winter temperatures, drafts	minimum 60°F winter, avoid drafts
	leaf drop	cold, dry air, drafts	same as above
	brown leaf edges	lack of water	check watering
300	bleached, washed out leaves	excessive sunlight	provide some shade
DRACAENA	bleached patches on leaves	excessive sun	shade partially
	brown spots on leaves	underwatering	keep moist at all times
	yellow lower leaves	old age, soluble salts, overwatering	leaves normally die after two years, but can also indicate problems

	Symptoms	Cause	Control
DRACAENA, Continued			
	soft leaves, curled brown edges	too cold	minimum 55°F winter temperature, avoid drafts
	yellow edges, brown tips	underwatering, drafts, low humidity	keep moist, avoid drafts and raise humidity
FERNS	brown spots, yellowing beginning at base of frond	high temperatures	temperature at 60 to 70°F
	bleached appearance, scorch marks	excessive sun	shade in the summer
	bleached appearance, weak growth	low nutrients	fertilize the plant
	dying back	dry soil or air	control watering
FICUS	leaf drop on rubber plants	overwatering	provide proper amounts of water
	leaf drop on fig trees (acclimatization)	low light levels	needs ample light
	leaf drop	low temperatures, excess fertilizer	not less than $55^{\circ}\mathrm{F}$, and provide proper fertilization
	yellow edges, loss of lower foliage	underfertilization	provide proper fertilization
	dry shriveled leaves	low humidity, underwatering	watch watering and raise humidity
FUCHSIA	defoliation	too hot, too dry	correct the environment
	loss of lower leaves	lack of light, underwatering	provide adequate light and water properly
	bud abortion	poor watering, high heat, low light, dry air	correct the environment
GERANIUM	yellow leaf margins	cycocel injury	apply proper amounts of the chemical, disappears with time
	petal shattering	high ethylene levels on seed varieties	spray with silver thiosulfate
	yellowing, drying of leaves from edges, wilt	drought stress	water correctly
GLOXINIA	premature budding on small plants	late transplanting, too hot, dry, high light, lack of nitrogen	transplant quickly, water well, maintain adequate humidity, 65 to 70°F night temperature, shade in summer (2,000 to 2,500 fc), use 100 ppm nitrogen 15-15-15
	buds turn black or brown	overfertilization, low humidity, low temperatures, low light, irregular watering	use fertilization recommended above, raise humidity, 65 to 70°F nights, 2,000 to 2,500 fc optimum, water on schedule
HYACINTH	flower stalk separates from the basal plate—spitting	freezing	keep bulbs from freezing
	flower stalk falls over after elongation	inadequate calcium, trans- location problem if kept cold too many weeks and forcing temperatures too high	use 1,000 to 2,000 ppm ethephon when shoots are 3 to 4 inches long or color shows
HYDRANGEA	blind wood (no buds)	poor light, early storage, early defoliation, too low temperatures	follow growing schedule carefully, need high light levels for initiation, defoliate on time
	chlorosis	low iron, poor roots	use ${\rm FeSO_4}$ 3 lb/100 gal drench, may also need magnesium
IVY	brown, dry, leaf edges,	too warm, spider mites	lower temperature, spray with miticide

7.4	Symptoms	Cause	Control
IVY, Continued			
	leaves all green on variegated varieties, leaves undersized, spindly growth	low light	raise light levels
	brown tips, stunted growth	low humidity, spider mites	raise humidity, spray with miticide
KALANCHOE	yellowing, cupping of leaves at budding	improper lighting	proper lighting—start under short day and change to long day lighting
LILIES	leaf scorch, leaf tips	high phosphorus ('Ace' more sensitive), fluoride in water	use low P
	bud abortion	high ethylene, low light, high temperatures	strict temperature control, higher light in winter, no ethylene sources
	yellowing, light green upper leaves	high pH, high phosphorus	pH 6.5 to 7.0, use low P fertilizer
MARIGOLDS	bud abortion	high day temperatures, low night temperatures, ethylene damage	control temperatures, use silver thiosulfate
	lack of flowering, bronze foliage	pH too low	raise pH
ORCHID	brown, hard, dry spots on leaves, droopy growth	sun scorch, low light, or incorrect watering	shade from the sun, need 10 to 15 hours light per day, keep moist, use tepid water
PETUNIA	bud abortion, tip dieback and fasciation	overwatering (ethylene effect)	water correctly, use well drained soils
PHILODENDRON	brown, dry tips and edges	dry air	raise humidity
	small pale leaves	lack of light	raise light levels
	brown, dry leaves leading to leaf drop	too hot	keep 65°F
	yellowing leaves	overwatering, under- fertilization	avoid keeping soil saturated, feed properly
	yellow leaves, brown dry spots	underwatering	water correctly
PILEA	brown tips and edges, discoloration	low light or sudden drop in temperature	not less than 50°F winter, raise light levels
	leaves wilted, discolored, rotted, drooping	overwatering	decrease watering
POINSETTIA	leaf drop	excessive drying, injured roots from fertilizer, draft	watch soluble salts, avoid drafts, temperature 65°F nights, water well
	leaf crippling	rapid temperature rise and decrease in humidity at same time	maintain low humidity at night
	latex eruption	low temperature, high humidity, high soil moisture causes cells to erupt	avoid this combination
	split bracts	floral initiation followed by a vegetative period, buds fail to develop	proper scheduling, control of day length
	premature cyathia drop, tip burn, edges burned	possibly too much Temik on leaves	apply Temik according to label
PRIMULA	chlorosis	lack of iron	use chelated iron
RIEGER BEGONIA	oedema (water soaked blisters on surface of leaf become corky, leaves yellow and drop)	excessive water in leaves	don't overwater, lower humidity
	heat delay	night temperatures greater than 75°F	grow at 62 to 65°F

	Symptoms	Cause	Control
ROSE	wilting while wet	soluble salts	leaching
SALVIA	yellow lower leaves, browning turns black and falls off	wilt damage	avoid water stress—plants are very susceptible
SUCCULENTS	elongated, misshapen stems	high water in winter, low light in summer	decrease water in winter, increase light
	sudden leaf drop	cold water or underwatering	use tepid water
	leaves wilted, discolored brown dry spots	overwatering in winter, underwatering in summer	keep very hot in winter, increase watering in summer
TOMATOES	purplish stems, low fruit yield	cold injury	seedling temperature 60 to 75°F
	epinastic curvature	ethylene damage	check for an ethylene source (i.e. heaters)
TULIPS	bud abortion	high temperatures, high ethylene, water stress, lack of ventilation in storage	control forcing temperatures, water adequately, ventilate in storage, temperatures 63°F night time and 68°F day time
	blindness (no buds)	very large bulbs	don't use bulbs greater than 12 to 13 cm
	flower stalk falls over after elongation	inadequate calcium, trans- location problem if kept cold too many weeks and forcing temperatures too high	force at temperatures below 68°F, use 2 lb/100 gal $\text{Ca}(\text{NO}_3)_2$ when put into greenhouse



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