

Chemicals for

Plant Disease Control at Home



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Retailers and consumers can become confused when trying to find a particular product to control a plant disease. The problems often arise when a specific chemical is recommended for controlling the disease, but the chemical is sold under a variety of trade names.

When a plant expert recommends that a certain chemical be used for plant disease control, he or she often refers to it by its common name. But not all product labels list the ingredients by their common names. Instead, they use chemical terminology. Consumers can become confused when trying to find a chemical that was recommended by its common name but is listed on the product labels by its chemical term.

Besides the problem of identifying the right products, homeowners also face a declining number of disease-control products that are available in small packages. To get what they need, homeowners may eventually have to buy chemicals in larger quantities. This poses several problems:

- Larger packaging instructions seldom give rates in quantity per gallon, but instead in quantity per acre.
- Larger size containers cost more (even though the cost per unit used is less).
- Adequate space for storing excess chemicals may not be available.

To help consumers and retailers identify the products used to control plant diseases in Texas, a

list of chemicals and the products available to homeowners is provided below. A survey was made to identify the chemical companies whose products are most commonly found in retail outlets in Texas.

The products contained in this listing are the ones currently being formulated. Discontinued products and formulations are often available at retail outlets until supplies are exhausted.

Not included are products normally packaged for agricultural use, even though some of these products are stocked in certain retail outlets. For example, copper hydroxide can be purchased in 2-pound bags under the trade name Kocide 101, but only the products sold in smaller quantities are listed here.

Homeowners can more easily determine what to buy if they understand what information is included on the product labels. Listed on every product label is the name of the active ingredient, which is the chemical that acts against the disease. The law requires that each product label include the chemistry terminology of the active ingredient. This terminology describes the chemical makeup of the compound.

Because chemical names are long and cumbersome to pronounce, each chemical has been assigned an official common name. For most people, it is easier to use the common name rather than the chemical name. Manufacturers are not required to put the common name on the label, but some do.

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Example:**Common name**

triadimefon

Chemical name

1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-butanone

Four tables are included in this publication to help homeowners and retailers distinguish among the products available:

- Table 1 lists common chemical names and the corresponding chemical name for each active ingredient.
- Table 2 lists all trade name products and product manufacturers for each chemical. Combination products, those containing more than

one chemical, are included. In most cases, the additional chemicals are insecticides. Table 2 also indicates whether a product can be used on at least one vegetable, one fruit or turf and/or one ornamental. Refer to the product labels for specific crops and instructions.

- Table 3 lists each product by company or brand name, with a reference number to Table 2. If you know the product name, use Table 3 to determine its location in Table 2, where the active ingredient is listed. Table 3 also serves as a reference to the various products sold under a given brand name.
- Table 4 lists the companies that formulate products under the various brand names.

Table 1. Plant disease control chemicals.

Common name	Chemical name
1. captan	N-trichloromethylthio-4-cyclohexene-1, 2-dicarboximide
2. chitin (organic)	(Poly-N-acetyl-D-glucosamine)-Protein
3. chlorothalonil	tetrachloroisophthalonitrile
4. copper ammonium complex	exact formula not known
5. copper hydroxide	copper hydroxide
6. copper salts	copper salts of fatty and resin acids
7. copper sulfate	copper sulfate pentahydrate
8. fosetyl-al	aluminum trio (O-ethyl phosphonate)
9. lime sulphur	calcium polysulfide
10. mancozeb	A coordination product of zinc ion and manganese ethylene bisdithiocarbamate
11. maneb	manganese ethylene bisdithiocarbamate
12. myclobutanil	alpha-butyl-alpha 4-(chlorophenyl)-1 H-1,2, 4-triazole-1-propanenitrile
13. neem oil (organic)	clarified hydrophobic extract of neem oil
14. PCNB	pentachloronitrobenzene
15. Potassium bicarbonate	potassium bicarbonate
16. Propiconazole	1-(2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl)-1H-1,2,4-triazole
17. Quaternary ammonium compound	various forms of N-alkyl ammonium chloride
18. streptomycin sulfate	streptomycin sulfate
19. sulphur	sulphur
20. tebuconazole	alpha-[2-(4-chlorophenyl)ethyl]-alpha-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol
21. thiophanate methyl	dimethyl 4, 4'-O-phenylenebis (3-thioallophanate)
22. thiram	tetramethylthiuram disulfide
23. triadimefon	1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2, 4-triazol-1-yl)-butanone
24. triforine	(N,N'[1,4 piperazinediyl]bis (2,2,2-trichloroethylidene)]bis[formamide])

Table 2. Trade and brand names of products containing the chemical ingredients listed in Table 1.

Common name/trade name	Brand name	(*V = Vegetable; F = Fruit; T/O = Turf/Ornamental)		
		V*	F*	T/O*
1. Captan				
a. Captan Fungicide	Hi-Yield	seed tr	X	X
b. Captan Fruit and Ornamental	Bonide		X	X
Captan combination products				
c. Insecticide Miticide Fungicide (captan + carbaryl + malathion)	Bonide		X	X
d. Fruit Tree Spray (captan + malathion)	Ferti-lome		X	
e. Liquid Fruit Tree Spray (captan + methoxychlor + carbaryl + malathion)	Dexol		X	
f. Fruit Tree Spray (captan + carbaryl + malathion)	Bonide		X	X
g. Rescue (captan + carbaryl + malathion)	Martin's		X	X
h. Rose Rx (captan+malathion+carbaryl)	Bonide		X	
2. Chitin				
a. Nem-A-Cide Nematode Control	Hi-Yield	X	X	X
3. Chlorothalonil				
a. Garden Disease Control	Ortho	X	X	X
b. Liquid Fungicide	Ferti-lome	X		X
c. Daconil Lawn, Vegetable and Flower Fungicide	Hi-Yield	X		X
d. Fung-onil Concentrate	Bonide	X	X	X
e. Fung-onil (Ready-To-Use)	Bonide	X	X	X
f. Bravado Fungicide	Monterey	X	X	X
4. Copper ammonium complex				
a. Liqui-Cop	Monterey	X	X	X
5. Copper hydroxide				
a. Blackspot Powdery Mildew Control	Ferti-lome			X
b. Copper Fungicide	Hi-Yield	X	X	X
6. Copper salts				
a. Liquid Copper Fungicide	Bonide	X	X	X
b. Concern Copper Soap Fungicide	Concern	X	X	X
7. Copper sulfate				
a. Bordeaux Powder	Dexol	X	X	X
b. Copper Dust or Spray	Bonide	X	X	X
copper sulfate combination products				
c. Bordeaux Mix Fungicide (copper sulfate + lime)	Hi-Yield	X	X	X
d. Dragon Dust with Copper (copper sulfate+carbaryl+rotenone)	Bonide	X		
e. Garden Dust (copper sulfate+rotenone)	Bonide	X	X	X
f. Rose and Flower Dust (copper sulfate+rotenone)	Greenlight			X
8. Fosetyl-AI				
a. Monterey Aliette	Monterey			X

Table 2. Trade and brand names of products containing the chemical ingredients listed in Table 1. (continued)

		(*V = Vegetable; F = Fruit; T/O = Turf/Ornamental)			
Common name/trade name	Brand name	V*	F*	T/O*	
9. Lime sulfur					
a. Lime-Sulfur Spray	Bonide		X	X	
b. Lime Sulphur Spray	Hi-Yield		X	X	
Lime sulfur combination products					
c. Oil & Lime Sulfur Spray (lime sulfur+oil)	Bonide		X	X	
10. Mancozeb					
a. Mancozeb Flowable	Bonide	X		X	
11. Maneb					
a. Maneb Garden Fungicide	Hi-Yield	X		X	
12. Myclobutanil					
a. Immunox Multi-Purpose Fungicide	Spectracide		X	X	
b. Immunox Lawn Disease Control Systemic Fungicide Concentrate	Spectracide			X	
c. Fung-Away Systemic Lawn Fungicide - Granular	Greenlight			X	
d. F-Stop	Ferti-lome			X	
myclobutanil combination products					
e. Immunox Insect and Disease Control (myclobutanil+permethrin)	Spectracide			X	
f. Immunox Insect and Disease Control (aerosol)	Spectracide			X	
13. Neem Oil					
a. Neem Concentrate	Green Light	X	X	X	
b. Rose Rx 3-in-1	Bonide	X	X	X	
c. Rose Defense	Green Light			X	
d. Powdery Mildew Killer	Green Light	X	X	X	
e. 70% Neem Oil	Monterey	X	X	X	
f. Triple Action Plus	Ferti-lome	X	X	X	
g. Rose Flower & Vegetable Spray	Ferti-lome	X		X	
14. PCNB					
a. Terraclor Granular Fungicide	Hi-Yield			X	
b. Turfcide 10G	Crompton			X	
c. Turfcide 400 (Liquid)	Crompton			X	
d. Turf and Ornamental Fungicide	Hi-Yield			X	
PCNB combination products					
e. Azalea, Camellia, Crepe Myrtle Spray (PCNB + malathion)	Ferti-lome			X	
f. Fungicide for Brown Patch (PCNB + fertilizer)	Ferti-lome				
15. Potassium bicarbonate					
a. Remedy	Bonide	X	X	X	
16. Propiconazole					
a. Systemic Fungicide	Ferti-lome			X	
b. Lawn Disease Control	Ortho			X	
c. Infuse	Bonide			X	

Table 2. Trade and brand names of products containing the chemical ingredients listed in Table I. (continued)

		(*V = Vegetable; F = Fruit; T/O = Turf/Ornamental)			
Common name/trade name	Brand name	V*	F*	T/O*	
17. Quaternary ammonium compounds					
a. Consan 20	Hi-Yield			X	
b. Consan Triple Action 20	Parkway			X	
18. Streptomycin sulfate					
a. Fire Blight Spray	Ferti-lome		X	X	
b. Fire Blight Spray	Bonide		X	X	
19. Sulphur					
a. Wettable Dusting Sulphur	Green Light	X	X	X	
b. Dusting Sulphur	Ferti-lome	X	X	X	
c. Dusting Wettable Sulphur	Hi-Yield	X	X	X	
d. Garden Fungicide	Safer	X	X	X	
e. Sulfur Plant Fungicide	Bonide	X	X	X	
20. tebuconazole					
a. Disease Control for Roses, Flowers & Shrubs	Bayer Advanced			X	
tebuconazole combination products					
b. All-In-One Rose & Flower Care (tebuconazole+imidacloprid+fertilizer)	Bayer Advanced			X	
21. Thiophanate methyl					
a. Systemic Fungicide	Green Light			X	
b. Halt Systemic Fungicide	Ferti-lome			X	
c. Lawn Fungus Control	Scotts			X	
22. Thiram					
a. Bonide Bulb Saver	Bonide			X	
23. Triadimefon					
a. Fung-Away (Systemic Lawn Fungicide Spray)	Green Light			X	
b. Fung-Away (Systemic Fungicide)	Green Light			X	
c. Lawn Fungicide Granules	Hi-Yield			X	
d. Fungus Control for Lawns	Bayer Advanced			X	
e. Fungi-onil Lawn Disease Control	Bonide			X	
24. Triforine					
a. Rose Pride Rose & Shrub Disease Control	Ortho			X	
Triforine combination products					
b. Ortho Orthenex Garden Insect and Disease Control (triforine + acephate + vendex®)	Ortho			X	
c. Ortho Orthenex Garden Insect and Disease Control (aerosol) (triforine + acephate + resmethrin)	Ortho			X	

Table 3. Index to plant disease control products in Table 2.

Brand name	Product name	Reference Table 2	
Bayer Advanced Lawn	Fungus Control for Lawns	23-d	
	Disease Control for Roses, Flowers and Shrubs	20-a	
	All-In-One Rose and Flower Care (tebuconazole+imidacloprid+ fertilizer)	20-b	
Bonide	Bonide Bulb Saver	22-a	
	Captan Fruit and Ornamental	1-b	
	Liquid Copper Fungicide	6-a	
	Copper Dust or Spray	7-b	
	Fung-onil Concentrate	3-d	
	Fung-onil (Ready-to-Use)	3-e	
	Fung-onil Lawn Disease Control	23-e	
	Lime Sulfur Spray	9-a	
	Mancozeb Flowable	10-a	
	Fire Blight Spray	18-b	
	Remedy	15-a	
	Sulfur Plant Fungicide	19-e	
	Rose Rx 3-in-1	13-b	
	Infuse	16-c	
	Combination products		
		Fruit Tree Spray (captan + malathion + carbaryl)	1-f
		Insecticide Miticide Fungicide (captan + carbaryl + malathion)	1-c
		Rose Rx (captan+malathion+carbaryl)	1-h
		Dragon Dust with Copper (copper sulfate + carbaryl + rotenone)	7-d
	Garden Dust (copper sulfate + rotenone)	7-e	
	Oil and Lime Sulfur Spray (lime sulfur + oil)	9-c	
Concern	Concern Copper Soap Fungicide	6-b	
Crompton	Turfcide 10G	14-b	
	Turfcide 400 (liquid)	14-c	
Dexol	Liquid Fruit Tree Spray	1-e	
	Bordeaux Powder	7-a	
Ferti-lome	Blackspot Powdery Mildew Control	5-a	
	Dusting Sulphur	19-b	
	Fire Blight Spray	18-a	
	Halt Systemic Fungicide	21-b	
	Liquid Fungicide	3-b	
	F-Stop	12-d	
	Triple Action Plus	13-f	
	Rose Flower & Vegetable Spray	13-g	
	Systemic Fungicide	16-a	
	Combination products		
		Azalea, Camellia, Crepe Myrtle Spray (PCNB + malathion)	14-e
	Fruit Tree Spray (captan + malathion)	1-d	
	Fungicide for Brown Patch (PCNB + fertilizer)	14-f	
Green Light	Fung-Away (Systemic Lawn Fungicide Spray)	23-a	
	Fung-Away (Systemic Fungicide)	23-b	
	Fung-Away (Systemic Lawn Fungicide-Granular)	12-c	
	Systemic Fungicide	21-a	
	Wettable Dusting Sulphur	19-a	

Table 3. Index to plant disease control products in Table 2. (continued)

Brand name	Product name	Reference Table 2
Green Light (continued)	Neem Concentrate	13-a
	Rose Defense	13-c
	Powdery Mildew Killer	13-d
	Combination products	
	Rose & Flower Dust (copper sulfate + rotenone)	7-f
Hi-Yield	Daconil Lawn, Vegetable and Flower Fungicide	3-c
	Lawn Fungicide Granules	23-c
	Lime Sulphur Spray	9-b
	Maneb Garden Fungicide	11-a
	Terraclor Granular Fungicide	14-a
	Dusting Wettable Sulphur	19-c
	Nem-A-Cide Nematode Control	2-a
	Copper Fungicide	5-b
	Captan Fungicide	1-a
	Consan 20	17-a
	Turf and Ornamental Fungicide	14-d
	Combination products	
		Bordeaux Mix Fungicide (copper sulfate + lime)
Martin's	Rescue (captan + carbaryl + malathion)	1-g
Monterey	Bravado Fungicide	3-f
	Monterey Aliette	8-a
	Liqui-Cop	4-a
	70% Neem Oil	13-e
Ortho	Rose Pride Rose & Shrub Disease Control	24-a
	Garden Disease Control	3-a
	Lawn Disease Control	16-b
	Combination products	
		Ortho Orthenex (triforine + acephate + vendex®)
	Ortho Orthenex (aerosol)	24-c
	(triforine + acephate + resmethrin)	
Parkway	Consan Triple Action 20	17-b
Safer	Garden Fungicide	19-d
Scotts	Lawn Fungus Control	21-c
Spectracide	Immunox Multi-Purpose Fungicide	12-a
	Immunox Lawn Disease Control Systemic Fungicide Concentrate	12-b
	Combination products	
	Immunox Insect and Disease Control	12-e
	(myclobutanil + permethrin)	
	Immunox Insect and Disease Control (aerosol)	12-f
	(myclobutanil + permethrin)	

Table 4. Companies offering fungicides in small packages.

Brand name	Address	
Bayer Advanced	Bayer Advanced P.O. Box 3900 Peoria, IL 61615 www.bayeradvanced.com	
Bonide	Bonide Products, Inc. 6301 Sutliff Rd. Oriskany, NY 13424 www.bonideproducts.com	
Crompton	Crompton Corp. 199 Benson Road Middlebury, CT 06749	
Dexol	Value Garden Supply P.O. Box 585 St. Joseph, MO 64502 www.valuegardens.com	
Ferti-lome Hi-Yield	Voluntary Purchasing Group, Inc. P.O. Box 460 Bonham, TX 75418 www.fertilome.com	
Green Light	Green Light Company P.O. Box 17985 San Antonio, TX 78217-0985 www.greenlightco.com	
Martin's	Control Solutions, Inc. 5903 Genoa Red Bluff Pasadena, TX 77507 www.controlsolutionsinc.com	
Monterey	Lawn and Garden Products, Inc. P.O. Box 35000 Fresno, CA 93745-5000 www.montereylawngarden.com	
Ortho Scotts	Ortho Consumer Service P.O. Box 1749 Columbus, OH 43216 www.scotts.com	Scotts Consumer Service 14111 Scottslawn Rd. Marysville, OH 43041
Parkway	Parkway Research Corp. 13802 Chrisman Rd. Houston, TX 77039 www.parkwayresearch.com	
Safer Concern	Woodstream Corporation 69 N. Locust St. Lititz, PA 17543 www.victorpest.com	
Spectracide	United Industries Corp. P.O. Box 142642 St. Louis, MO 63114-0842 www.spectrumbrands.com	



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