

Home Gardens Vegetables

The home gardener has several chemical control products to choose from, including fungicides and bactericides. Most of the available products for home gardeners work on contact and must be applied before the disease occurs or as soon as disease symptoms are observed. The most common fungicidal products for home garden use contain chlorothalonil, sulfur or mancozeb. Products containing copper can be used as fungicides or bactericides. Organic gardeners can use sulfur or copper to manage vegetable diseases. A list of available fungicides and bactericides is provided in Table 1. However, many home gardeners prefer to grow their vegetables organically or using products that are more “environmentally or earth friendly” than traditional synthetic chemicals. Biopesticides are derived from natural materials such as plants, animals, minerals and fungi or bacteria, and are most effective when used in conjunction with cultural methods. A list of biopesticides available to home gardeners is provided in Table 2.

Table 1. Fungicides available for disease management in home vegetable gardens

Product Name	Comments
captan Type of fungicide: Contact Crops: Beans, beets, cabbage, corn, melons, peas, spinach, squash and Swiss chard Diseases controlled: Damping-off diseases	
Hi-Yield Captan 50W Fungicide	- Seed treatment only
chlorothalonil Type of fungicide: Contact Crops: Most vegetables Diseases controlled: Anthracnose, Botrytis, downy mildew, early blight, fruit rots, fungal leaf spots and blights, gummy stem blight, late blight, powdery mildew and rust	
Bonide Fung-onil Multi-purpose Fungicide Ferti-lome Broad Spectrum Landscape & Garden Fungicide GardenTech Daconil® Fungicide Hi-Yield Vegetable, Flower, Fruit and Ornamental Fungicide Scotts Ortho® MAX® Garden Disease Control	
copper Type of fungicide: Contact Crops: Most vegetables Diseases controlled: Anthracnose, bacterial leaf spots & blights, early blight, fungal leaf spots and blights, gummy stem blight, powdery mildew, scab and white rust	
Bonide Copper Dust Bonide Garden Dust (also contains an insecticide) Bonide Liquid Copper Fungicide Bonide Dagoon Dust with Copper Concern Copper Soap Fungicide Liqui-Cop Copper Fungicide Garden Spray Natural Guard Copper Soap Fungicide SA-50 Southern Ag Liquid Copper Fungicide	- Can be used for organic gardening. - Do not mix with liquid fertilizers. - Do not use in spray solutions with a pH of less than 6.5. - May cause staining of masonry, concrete, etc.
mancozeb Type of fungicide: Contact Crops: Asparagus, corn, cucurbits, onions, potatoes and tomatoes Diseases controlled: Anthracnose, early blight, fungal leaf spots and blights, gummy stem blight and rust	
Bonide Mancozeb Flowable with Zinc Southern Ag Dithane M-45	
myclobutanil Type of fungicide: Systemic Crops: Asparagus, cucurbits, snap bean and tomatoes Diseases controlled: Pod tip rot, powdery mildew and rust	
Spectracide Multi-purpose Fungicide	- Do not spray within 14 days of harvest.

Home Gardens Vegetables

Product Name	Comments
<p>phosphorus acid Type of fungicide: Systemic Crops: Most vegetables Diseases controlled: Root, crown and fruit rots caused by <i>Phytophthora</i> and <i>Pythium</i> spp., downy mildew and late blight</p>	
<p>Monterey Agri-Fos Systemic Fungicide</p>	
<p>propiconazole Type of fungicide: Systemic Crops: Sweet corn Diseases controlled: Leaf spots and blights and rust</p>	
<p>Bonide Fung-onil Lawn and Garden Disease Control Ready to Spray Bonide Infuse Systemic Disease Control Lawn and Landscape Ready to Spray Ferti-lome Ready to Spray Liquid Systemic Fungicide Maxide Dual Action Disease Killer Ready to Spray</p>	<p>- Do not spray within 14 days of harvest.</p>
<p>sulfur Type of fungicide: Contact Crops: Beans (may injure some varieties), cole crops, onions and peas Diseases controlled: Botrytis gray mold, downy mildew, powdery mildew and rust</p>	
<p>Bonide Garden Dust Bonide Sulfur Plant Fungicide Bonide Tomato & Vegetable 3 in 1 Ferti-lome Dusting Sulfur Hi-Yield Dusting Wettable Sulfur Safer Brand Garden Fungicide II Southern Ag Wettable or Dusting Sulfur</p>	<p>- Do not re-enter treated area for 24 hours after application.</p> <p>- Do not use during periods of high temperatures (85°F or higher) or within two to four weeks of using an oil spray.</p> <p>- Do not use on cucurbits (cucumbers, squash, melons etc.)</p>
<p>sulfur + potassium salts Type of fungicide: Contact Crops: Beans, cucumbers, peas, potatoes and squash Diseases controlled: Powdery mildew</p>	
<p>Safer Brand 3-in-1 Garden Spray¹</p>	<p>- Do not use in full sun, when temperature exceeds 90°F or within four weeks of an oil spray.</p>

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Table 2. Biopesticides available for disease management in home vegetable gardens

Product Name	Disease(s) Controlled	Crops	Comments
Bayer Advanced Serenade Garden Disease Control	Alternaria spots and blight Botrytis blight Gummy stem blight Onion purple blotch Powdery mildew	Most vegetables	
GreenCure Foliar Fungicide	Leaf spots and blights Powdery mildew	Most vegetables	
BioSafe Disease Control	Leaf spots and blights Powdery mildew	All vegetables	
Novozyme Actinovate Lawn and Garden	Botrytis gray mold Damping-off diseases Leaf spots and rust	Most vegetables and herbs	
Novozyme Actino-Iron Lawn and Garden	Damping-off diseases Root and crown rots	Most vegetables and herbs	
BioWorks RootShield Home & Garden	Damping-off diseases Root and crown rots	Most vegetables	- Apply to seed, plant roots and soil only
SaferGro Mildew Cure	Powdery mildew	All vegetables	
BioWork MilStop	Powdery mildew	Most vegetables	
Neem Oils (many brands)	Powdery mildew Rusts	Most vegetables	
Dr. Earth Final Stop Disease Control Fungicide	Botrytis gray mold Leaf spots and blights Powdery mildew	Most vegetables	- May cause leaf burn on some plants
Simple Success Companion Biological Fungicide	Damping-off diseases Root and crown rots	Most vegetables and herbs	

Information in this section was last updated in December 2019 by Dr. R. Singh.