



Selected Vegetable Diseases

*Diane Relf**

Disease or Other Cause	Vegetables	Symptoms	How to Control
Fungi			
Anthracnose	Beans Cucumbers Cantaloupes Watermelons Peppers Tomatoes	Check for reddish-brown or black sunken spots or blotches on leaves, stems, pods, and/or fruits.	Practice two-year rotation or longer. Avoid overcrowding and keep weeds removed. Destroy plant wastes after harvest. Spray or dust with approved fungicides. Use certified seed.
Early Blight or Target Spot	Tomatoes Potatoes	Brown to black spots on leaves and stems. Spots are angular to round with concentric rings (targets). Spots may merge to kill portions of leaves and defoliate the plants, starting at the base. Tomato fruit may sunscald and show sunken leathery spots near the stem.	Practice crop rotation and destroy plant wastes after harvest. Use well-drained soil and keep weeds down. Space plants to allow good air circulation. Use resistant varieties. Spray or dust with approved chemical controls.
Late Blight	Potatoes Tomatoes	Develops during wet, humid season. Irregular, greenish-black, water-soaked spots develop on leaves, petioles, and stems. May resemble sunscald or frost damage in advanced stage. A sparse whitish mold appears on underleaf surface. Fruits and tubers also affected.	Same as for Early Blight. See above.

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Septorial Leaf Blight	Tomato	Forms circular spots randomly scattered across leaflets. The centers are often gray and under favorable conditions will have small black fruiting bodies. Lower leaves first affected. Spotted leaves become chlorotic and dry out quickly.	Hot water treat seed. Control weeds, especially of solanaceous family. Pick off affected leaves and destroy.
Downy Mildew	Beans Cucumbers Cantaloupes	Yellow to dark areas that may be vague or sharply defined, occurring on upper surface of older leaves. White to dark cottony mold on underside of leaves and on bean pods. Vines may be scorched and killed.	For cultural controls same as Powdery Mildew. Consult Extension Agent for approved chemical controls.
Powdery Mildew	Squash Pumpkins Watermelons Cantaloupes Cucumbers	White or brown mealy growth on leaves and young stems (esp. on upper surface and occasionally on the fruit). Plants may yellow and wither, while fruit sun-scalds or ripens prematurely.	Use resistant varieties. Practice rotation and good weed control. Space plants well. Destroy crop residues. Spray or dust with approved chemical controls.
Fusarium and/or Verticillium Wilt	Tomatoes Watermelons Cantaloupes	Seedlings wilt and die. Older plants are stunted while leaves wilt, turn yellow, wither, and drop. Dark streaks appear in lower stem and roots. If only wilting symptom occurs, may be black walnut wilt if a tree is near garden.	Plant in well-drained, wilt-free soil and follow a 3-4 year crop rotation. Use resistant varieties where possible.
Yeast Spot	Lima beans	Dark brown, often wrinkled lesions occur on the lima. Pod must be opened to see this condition.	Caused by a yeast which is transmitted by a stink bug. Control of stink bug will prevent this disease.
Bean Rust	Beans (many species)	Reddish-brown or "rusty" pustules form most abundantly on underside of leaves. Lesions will also form on the top of leaves and sometimes on stems and pods. Defoliation may occur.	Rotation of crops is useful for large plantings but is of little use for home gardens. Use resistant varieties. Do not work in beans when leaves are wet. Use fungicide if necessary. Remove plant wastes when harvest is over.

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Scab or Pox	Cucumbers Muskmelon Honeydew Pumpkin Squash	All above-ground tissues are susceptible. Leaf spots water-soaked at first, angular in outline, soon becoming dry. Dead tissue often falls out, leaving leaf tattered. Cankers may form on vines. Fruit spots sunken, may exude sticky sap. Green velvety growth of spores and mycelium will form in the cavity.	Plant in well-drained soil; hot water treat seed. Plant resistant varieties if possible.
Root Rot	Many vegetables	Plants may become pale, yellow, and/or stunted. May wilt, die back or collapse. They do not respond to fertilizer or water. Decayed roots may be mushy or firm and covered with mold.	Practice rotation. Avoid wet, poorly drained soils. Remove and destroy affected plants. Control nematodes and avoid root injury.
Damping-off	Many vegetables	Seeds rot and fail to emerge. Seedlings appear but wilt and turn brown or fall over.	Select a well-drained garden site. Plant seed treated with fungicide. Indoors, use sterile seed-starting mixture. Do not keep soil too wet.
Bacteria			
Bacterial Wilt (Pseudomonas)	Tomato Potato Other species of Solanaceae	Wilting of foliage. Youngest leaves often wilt first and oldest may become chlorotic. Browning of internal stem tissues or rotting of pith.	Select well-drained site. Practice weed control. Avoid planting susceptible crops in infested soil.
Bacterial Wilt (Erwinia)	Cucurbits	Leaves wilt from the leaves toward plant. Whole vine eventually wilts. Resistant plants may be dwarfed rather than wilt.	Spread by cucumber beetle. Control disease by keeping beetle populations under control. Small seedlings can be protected from beetles with cheesecloth cages.
Common Scab or Potato Scab	Irish potatoes Other plants with fleshy roots.	Scab-like lesions may be either sunken or raised. Potatoes usually have sunken lesions.	Keep soil pH below 5.3. Avoid alkaline fertilizers. Use certified seed potatoes. Rotate crops.

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Other Organisms			
Viruses	Many vegetables	Symptoms vary considerably. May consist of yellowing, mosaic pattern, streaking, stunting, spotting, mottling, etc.	Use resistant varieties where possible. Control weeds, insects, and nematodes, which may transmit disease.
Nematodes	Cucumbers Cantaloupes Tomatoes Carrots Many others	Plants may be stunted, yellow, and have galls or swellings on roots. Or roots may be stunted, bushy and discolored. Plants may suddenly wilt in dry weather.	Move garden to a different area or treat soil with approved chemical controls. Crop rotation with certain plants may be effective.
Cultural			
Blossom End Rot	Tomatoes Peppers Watermelons Squash	Blossom end of fruit becomes dry, sunken, leathery and brown-black; or light colored and papery in pepper. Half of fruit may be affected.	Maintain even soil moisture by watering during dry periods. Mulch or cultivate shallowly during drought. Fertilize according to soil test, being certain calcium is sufficient.
2,4-D and Dicamba Injury	Tomatoes Beans (most susceptible) All vegetables may be affected	Leaves and stems curl, become distorted and twisted. Leaf margins are wavy or frilled. Tomato fruit may be cracked and distorted.	Do not use 2,4-D in or near the vegetable garden.