Guidelines for Managing Specific Vegetable Diseases Organically
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Virus Diseases
Symptoms: Leaves - mosaic pattern, ringspots, malformed.
Fruit - ringspots, color-breaking.
Management: Destroy affected plants, control insect vectors.

Beans
Anthracnose (fungus)
Symptoms: Pods - black, sunken spots with salmon-ooze when moist.
Source: Crop debris, seed, spores spread by wind or rain.
Management: Rotate, use mulch, destroy plant debris.

Bacterial Blights (bacteria)
Symptoms: Leaves - brown spots often with yellow halo.
Pods - water-soaked spots, become brown, sometimes sticky.
Source: Crop debris, seed, bacteria spread by rain.
Management: Rotate, avoid dispersing bacteria with water or by handling plants, destroy plant debris.

White Mold (fungus)
Symptoms: Pods + stems – water-soaked spots; white cottony growth with black ‘peas’.
Source: sclerotia (black ‘peas’), spores spread by wind or rain.
Management: Long rotation, minimize leaf wetness, destroy plant debris.

Corn
Smut (fungus)
Symptoms: Fleshy galls on ears, leaves, stems and tassels.
Source: Soil, wind-blown spores; injury promotes.
Management: Remove galls before they open, rotate.

Crucifers (broccoli, cabbage, cauliflower, etc.)
Black Rot (bacterium)
Symptoms: Yellow, wedge-shaped spots at leaf margins.
Source: Seed, crop debris. Spread: Splashing water
Management: Hot-water-treated seed, resistant varieties, water at base of plant, work when plants are dry.

Soft Rot (bacterium)
Symptoms: Brown rotting tissue often with foul odor.
Source: Soil.
Management: Avoid injury, water at base of plant, cut broccoli at angle.

Cucurbits (cucumber, melons, gourd, squash, pumpkin)
Bacterial Wilt (bacterium)
Symptoms: Wilt-starts with leaf spots; then leaves, vines, plant.
Source: Cucumber beetles.
Management: Control beetles.

Powdery Mildew (fungus)
Symptoms: White, powdery spots on leaves.
Source: Wind-blown spores from other fields.
Management: Resistant varieties, sulfur and oil fungicides, control weeds.

Phytophthora Blight and Pythium Fruit Rots (fungi)
Source: Soil
Management: Manage soil moisture.

Choanephora Fruit Rot (fungus)
Symptoms: gray cottony growth; looks like black-capped pins.

Peppers
Bacterial Leaf Spot (bacterium)
Symptoms: Small brown spots on leaves and fruit; leaves fall off.
Source: Seed, crop debris. Spread: Splashing water
Management: Hot-water-treated seed, resistant varieties, water at base of plant
(keep leaves dry), work when plants are dry.

**Blossom End Rot** (abiotic)
Symptoms: Brown to black area at blossom end, depressed, leathery.
Cause: Calcium deficiency due to moisture fluctuations or excess nitrogen.
Management: Adequate moisture and nutrients; avoid root pruning.

**Phytophthora Blight** (fungus)

**Sunsca**d (abiotic)
Symptoms: White area on fruit part facing sun; soft, wrinkled, then papery.
Cause: Fruit exposed to intense sunlight due to insufficient leaves.
Management: Control leaf diseases.

**Soft Rot of Fruit**
Management: Avoid injury.

**Tomatoes**

**Anthracnose** (fungus; not the fungus causing anthracnose of bean)
Symptoms: Round, sunken spots on ripe fruit; turns black from center out. Entire fruit often rots.
Source: Crop debris, soil, seed, weeds (nightshade, velvetleaf).
Management: Rotate, treat seed, mulch, control weeds, destroy plant debris.

**Blossom End Rot** (see pepper section)

**Catface** (abiotic)
Symptoms: Malformation and scarring of fruit, usually blossom end.
Cause: Cool temperatures early in fruit development.
Management: Protect young plants from cool temperatures.

**Late Blight** (fungus)
Symptoms: Leaves - large, irregular, green to gray spots that turn brown; white mold on undersurface. Fruit - firm, large, irregular, brown/green spots with greasy, rough look; sharply defined margin.
Source: Crop debris, infected transplants, wind-blown spores.
Management: Rotate, inspect transplants, destroy debris.

**Buckeye Rot** (fungus)
Symptoms: Fruit - gray/green or brown large spot; becomes dark, firm leathery rot; concentric rings; smooth, undefined margin.
Source: Soil
Management: Rotate, mulch, stake plants, manage water.

**Early Blight** (fungus)
Symptoms: Leaves - small, circular, dark brown spots with concentric rings and yellow border. Fruit - dark, leathery, sunken spots.
Source: Seed, debris, infected transplants, weeds, wind-blown spores.
Management: Rotate, treat seed, mulch, control weeds, destroy plant debris.

**Septoria Leaf Spot** (fungus)
Symptoms: Leaves - small, circular spots; gray with dark border; tiny black specks on gray part.
Source: Seed, debris, infected transplants, weeds.
Management: Rotate, treat seed, mulch, control weeds, avoid dispersing spores with water or by handling plants, destroy plant debris.

**Bacterial Speck, Bacterial Spot and Bacterial Canker** (bacteria)
Source: Seed, debris, infected transplants.
Management: Hot-water-treat seed, avoid dispersing bacteria with water or by handling plants, destroy plant debris.

**Wilts** (fungi: Fusarium, Verticillium; bacteria)
Symptoms: Leaves - turn yellow, die, old ones first. Stems - brown inside.
Source: Infected transplants, soil, planting materials.
Management: Destroy affected plants.