

Diseases & Disorders



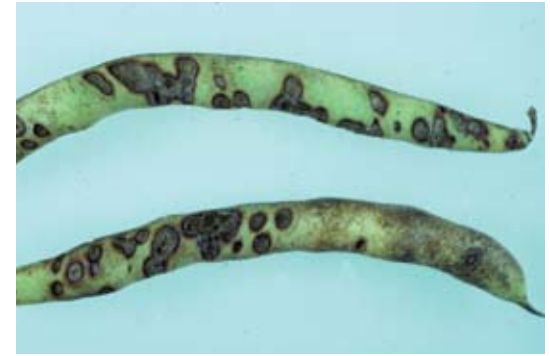
Wade Elmer, Connecticut Agriculture Experiment Station

D-1 Asparagus Fusarium - Fusarium wilt of asparagus caused by the fungus *Fusarium oxysporum* and *F. proliferatum*.



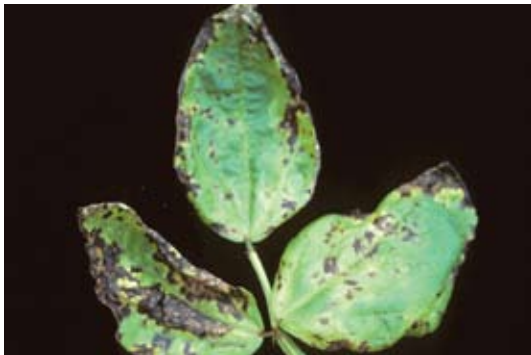
Dennis Johnson

D-2 Asparagus Rust - Rust of asparagus caused by the fungus *Puccinia asparagi*.



Robert L. Wick, University of Massachusetts

D-3 Bean Anthracnose - Anthracnose on green beans caused by the fungus *Colletotrichum lindemuthianum*.



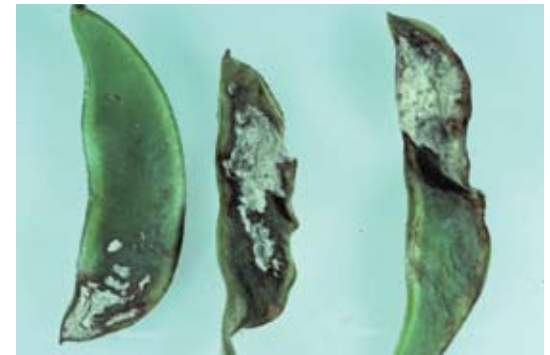
Robert L. Wick, University of Massachusetts

D-4 Bean Bacterial Blight - Bacterial blight of bean caused by the bacterium *Pseudomonas syringae*.



James G. Kantzes, University of Maryland

D-5 Bean, Lima, Brown Spot - Chlorotic halo and lesions caused by the bacterium *Pseudomonas syringae* pv. *syringae*.



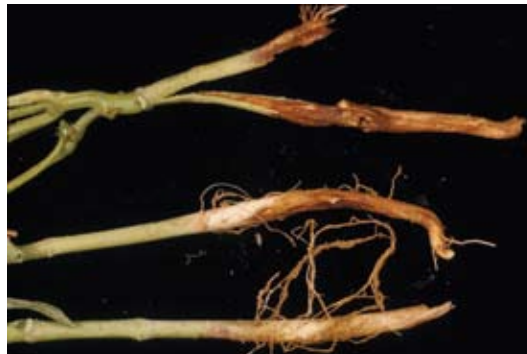
Robert L. Wick, University of Massachusetts

D-6 Bean, Lima, Downy Mildew - Downy mildew of bean caused by the fungus *Phytophthora phaseoli*.



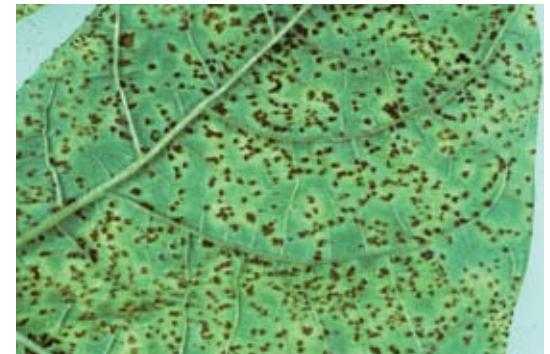
Robert Muironey, University of Delaware

D-7 Bean, Lima, Pod Blight - White sporangia of *Phytophthora capsici* on pod surface.



James G. Kantzes, University of Maryland

D-8 Bean, Rhizoctonia Root Rot - Root rot caused by *Rhizoctonia solani*. Roots and hypocotyl turn red-brown and adventitious roots form above the lesion.



Robert L. Wick, University of Massachusetts

D-9 Bean Rust - Rust of bean caused by the fungus *Uromyces phaseoli*.

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Robert L. Wick, University of Massachusetts

D-10 Bean Thielaviopsis - Root and crown rot caused by *Thielaviopsis basicola*.



Robert L. Wick, University of Massachusetts

D-11 Bean Virus - Symptoms of virus infection on bean.



Robert L. Wick, University of Massachusetts

D-12 Bean Sclerotinia Blight - Sclerotinia blight of green bean caused the fungus *Sclerotinia sclerotiorum*.



Robert L. Wick, University of Massachusetts

D-13 Beet Phoma - Phoma leafspot of beet caused by *Phoma betae*.



Robert L. Wick, University of Massachusetts

D-14 Swiss Chard Cercospora - Cercospora leaf spot of Swiss chard caused by *Cercospora beticola*.



Robert L. Wick, University of Massachusetts

D-15 Broccoli Alternaria - Alternaria head rot of broccoli caused by the fungus *Alternaria brassicicola*.



Robert L. Wick, University of Massachusetts

D-16 Broccoli Alternaria - Alternaria leaf spot of broccoli caused by the fungus *Alternaria brassicicola*.



John Howell, University of Massachusetts

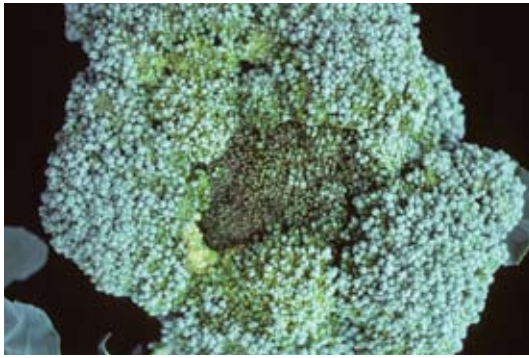
D-17 Broccoli Boron Deficiency - Injury to broccoli plant caused by boron deficiency.



Robert L. Wick, University of Massachusetts

D-18 Broccoli Clubroot - Clubroot of broccoli caused by *Plasmodiophora brassicae*.

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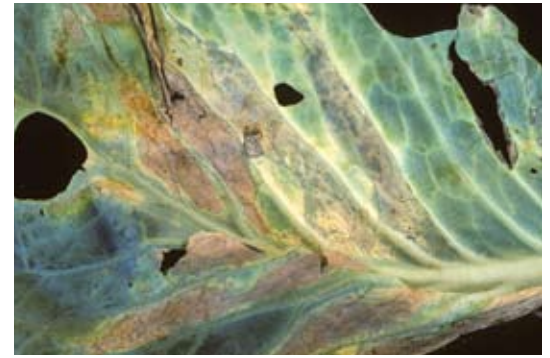
Robert L. Wick, University of Massachusetts

D-19 Broccoli Downy Mildew - Head rot of broccoli caused by the downy mildew fungus *Peronospora parasitica*.



Robert L. Wick, University of Massachusetts

D-20 Broccoli Downy Mildew - Downy mildew of broccoli leaves (underside) caused by *Peronospora parasitica*.



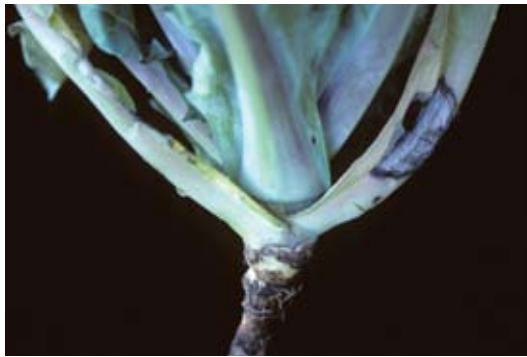
Robert L. Wick, University of Massachusetts

D-21 Broccoli Xanthomonas - Black rot of broccoli caused by the bacterium *Xanthomonas campestris*.



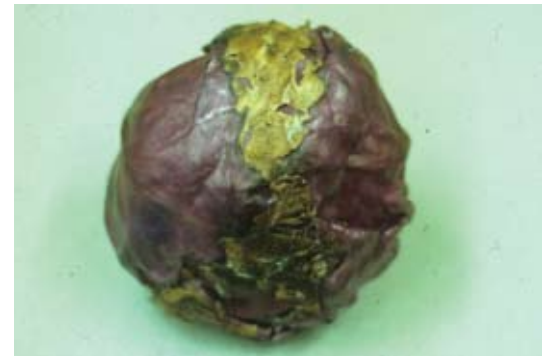
Jude Boucher, University of Connecticut

D-22 Cabbage Alternaria - Alternaria on cabbage leaf caused by the fungus *Alternaria brassicicola*.



Robert L. Wick, University of Massachusetts

D-23 Cabbage Phoma Black Leg - Black leg (stem rot) of cabbage caused by *Phoma lingam*. Note there is also a lesion on the petiole caused by Phoma.



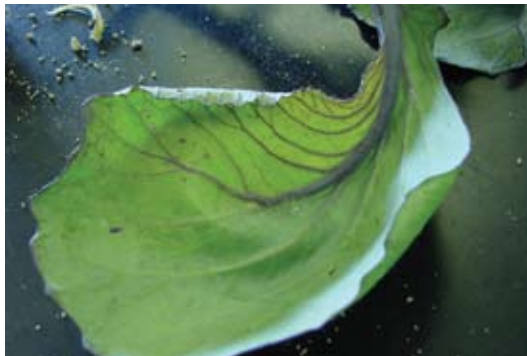
John Howell, University of Massachusetts

D-24 Cabbage Tip Burn - Tip burn of cabbage leaves caused by calcium deficiency.



C. Andrew Wyenandt, Rutgers

D-25 Cabbage White Mold. - A water soaked lesion and mycelia and sclerotia of the fungus *Sclerotinia sclerotiorum*.



C. Andrew Wyenandt, Rutgers

D-26 Cabbage Yellows - caused by one of two strains of *Fusarium oxysporum*. Note the one-sided leaf chlorosis and distortion.



Jude Boucher, University of Connecticut

D-27 Cabbage Xanthomonas - Black rot of cabbage caused by the bacterium *Xanthomonas campestris*.



Robert L. Wick, University of Massachusetts

D-28 Collard Downy Mildew - Downy mildew of collard caused by *Peronospora parasitica*.



Robert L. Wick, University of Massachusetts

D-31 Carrot Thielaviopsis - Cankers on carrot caused by the fungus *Thielaviopsis basicola*.



Robert L. Wick, University of Massachusetts

D-34 Parsnip Itersonilia - Itersonilia blight of parsnip caused by the fungus *Itersonilia perplexans*.



Robert L. Wick, University of Massachusetts

D-29 Carrot Alternaria - Alternaria blight of carrot caused by the fungus *Alternaria dauci*.



Robert L. Wick, University of Massachusetts

D-32 Carrot Xanthomonas - Leaf blight caused by the bacterium *Xanthomonas campestris* pv. *carotae*.



Robert L. Wick, University of Massachusetts

D-35 Parsnip Pseudomonas - Vascular discoloration caused by the bacterium *Pseudomonas marginalis*.



Robert L. Wick, University of Massachusetts

D-30 Carrot Root-Knot - Root-knot of carrot caused by the northern root-knot nematode, *Meloidogyne hapla*.



Robert L. Wick, University of Massachusetts

D-33 Parsnip Ascochyta and Rhizoctonia - Blight of parsnip foliage caused by *Rhizoctonia* and *Ascochyta*.



Robert L. Wick, University of Massachusetts

D-36 Corn Rust - Rust of corn caused by the fungus *Puccinia sorghi*.



Robert L. Wick, University of Massachusetts

D-37 Corn Smut - Corn smut caused by the fungus *Ustilago maydis*.



Robert L. Wick, University of Massachusetts

D-38 Corn Stewart's Wilt - Wavy elongated, bleached tissue characteristic of Stewart's wilt caused by the bacterium *Pantoea (Erwinia) stewartii*.



Robert L. Wick, University of Massachusetts

D-39 Corn Stewart's Wilt - Young corn plant killed by the Stewart's Wilt bacterium, *Pantoea (Erwinia) stewartii*.



Robert L. Wick, University of Massachusetts

D-40 Calabasa Black Rot - Fruit rot of calabasa caused by *Didymella bryoniae*.



James G. Kantzes, University of Maryland

D-41 Cucumber Angular Leaf Spot - Angular, irregularly shaped lesions that often have yellow borders, caused by *Pseudomonas syringae* pv. *lachrymans*.



Robert L. Wick, University of Massachusetts

D-42 Cucumber Anthracnose Leaf - Anthracnose on cucumber foliage caused by the fungus *Colletotrichum orbiculare*.



Robert L. Wick, University of Massachusetts

D-43 Cucumber Anthracnose Stem - Anthracnose on cucumber vine caused by the fungus *Colletotrichum orbiculare*.



Jude Boucher, University of Connecticut

D-44 Cucumber Bacterial Wilt - Bacterial Wilt of cucumber caused by the bacterium *Erwinia tracheiphila*.



James G. Kantzes, University of Maryland

D-45 Cucumber Belly Rot - Sunken brick-colored lesions caused by the fungus *Rhizoctonia solani*.



James G. Kantzes, University of Maryland

D-46 Cucumber Cottony Leak - White fluffy mycelial growth of *Pythium* spp. on cucumber fruit.



Robert L. Wick, University of Massachusetts

D-49 Cucumber Powdery Mildew - Powdery mildew of cucumber.



John Howell, University of Massachusetts

D-52 Cucumber Wind Burn - Injury to cucumber leaves caused by wind burn.



C. Andrew Wyenandt, Rutgers

D-47 Cucumber Downy Mildew - Angular lesions caused by *Pseudoperonospora cubensis* on leaves. Note the dark sporulation on the lower leaf surface.



James G. Kantzes, University of Maryland

D-50 Cucumber Scab - Sunken, oozing lesions caused by the fungus *Cladosporium cucumerinum* on fruit.



James G. Kantzes, University of Maryland

D-53 Muskmelon, Mildew - Infection by *Pseudoperonospora cubensis* (brown sporulation, downy mildew) and *Podosphaera xanthii* (white sporulation, powdery mildew).



C. Andrew Wyenandt, Rutgers

D-48 Cucumber Phytophthora Fruit Rot - White dense sporulation of the fungus *Phytophthora capsici*, cause of Phytophthora fruit rot on cucumber fruit.



Robert L. Wick, University of Massachusetts

D-51 Cucumber Septoria - Leaf spot of cucumber caused by *Septoria cucurbitacearum*.



James G. Kantzes, University of Maryland

D-54 Muskmelon, Fusarium Wilt - Wilt caused by the fungus *Fusarium oxysporum* f. sp. *melonis* with stem necrosis and oozing.



James G. Kantzes, University of Maryland

D-55 Muskmelon, Leaf Blight - caused by *Alternaria cucumerina*. Lesions often appear as circular brown spots with tan to white centers.



Kathryne L. Everts, Univ. MD and Univ. DE

D-58 Watermelon, Air Pollution Damage - Leaves with ozone damage.



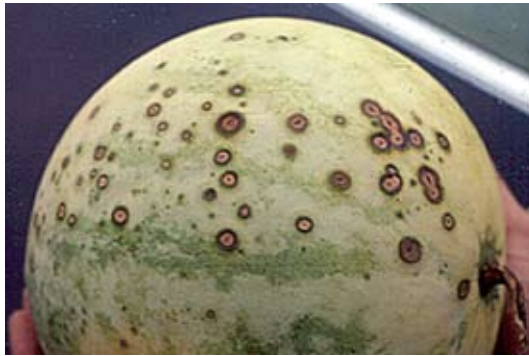
James G. Kantzes, University of Maryland

D-61 Watermelon, Fruit Blotch - Large olive green discoloration on fruit caused by the bacterium *Acidovorax avenae* subsp. *citrulli*.



Gerald E. Brust, University of Maryland

D-56 Muskmelon Manganese Toxicity - The small lesions have water-soaked edges.



James G. Kantzes, University of Maryland

D-59 Watermelon, Anthracnose - Lesions caused by *Colletotrichum orbiculare*. Under moist conditions salmon-colored sporulation may be present.



Kathryne L. Everts, Univ. MD and Univ. DE

D-62 Watermelon, Fruit Rot - Large circular lesions caused by *Phytophthora capsici*.



Kathryne L. Everts, Univ. MD and Univ. DE

D-57 Muskmelon Phytophthora Fruit Rot - Dark brown sunken lesions with white sporangial formation on the fruit surface (*Phytophthora capsici*).



Kathryne L. Everts, Univ. MD and Univ. DE

D-60 Watermelon, Downy Mildew - Downy mildew lesions on watermelon leaves caused by *Pseudoperonospora cubensis*.



James G. Kantzes, University of Maryland

D-63 Watermelon, Gummy Stem Blight - caused by the fungus *Didymella bryoniae*.

Diseases & Disorders



Keith Brownell, Syngenta, Inc.

D-64 Watermelon, Gummy Stem Blight - Pycnidia (fungal fruiting structures) caused by *Didymella bryoniae* on a watermelon stem.



Anthony P. Keinath, Clemson University

D-65 Watermelon, Powdery Mildew - Powdery mildew caused by *Podosphaera xanthii* on watermelon leaves.



Franklin Schales, University of Maryland,

D-66 Watermelon, Wilt - Caused by *Fusarium oxysporum* f. sp. *niveum*.



C. Andrew Wyenandt, Rutgers

D-67 Eggplant Crown Rot - Lesion at crown caused by *Phytophthora capsici*.



Jude Boucher, University of Connecticut

D-68 Eggplant Pythium - Fruit rot of eggplant caused by the fungus *Pythium*.



Robert L. Wick, University of Massachusetts

D-69 Eggplant Verticillium Wilt - Top stem shows vascular streaking due to the fungus *Verticillium*. Bottom stem is healthy.



Jude Boucher, University of Connecticut

D-70 Eggplant Verticillium Wilt - Verticillium wilt of eggplant caused by the fungus *Verticillium*.



C. Andrew Wyenandt, Rutgers

D-71 Leek Purple Blotch - Oblong purple lesions caused by the fungus *Alternaria porri*.



C. Andrew Wyenandt, Rutgers

D-72 Lettuce Bottom Rot - Caused by the fungus *Rhizoctonia solani*.

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Robert L. Wick, University of Massachusetts

D-73 Lettuce Septoria Blight - Septoria leaf blight of lettuce caused by the fungus *Septoria*.



C. Andrew Weyenandt, Rutgers

D-76 Parsley Leaf Blight - Tan lesions caused by the fungus *Septoria petroselini*; note the dark pycnidia that are visible on the lesions.



Robert L. Wick, University of Massachusetts

D-79 Pea Rhizoctonia - Root rot of peas caused by *Rhizoctonia solani*.



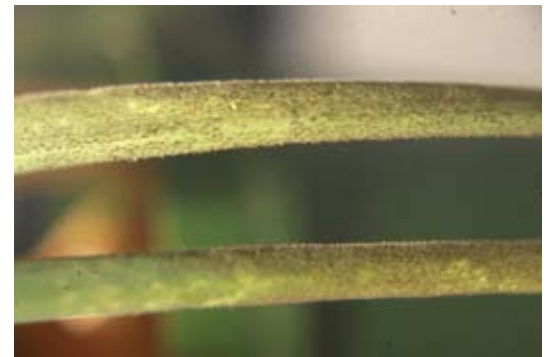
Melvyn L. Lacy, Michigan State University

D-74 Onion Leaf Blight. - Leaf blight caused by *Botrytis squamosa*; note small white lesions with halo.



James G. Kantzes, University of Maryland

D-77 Pea Leaf and Pod Spot - Tan sunken lesions caused by the fungus *Ascochyta pisi*.



Melvyn L. Lacy, Michigan State University

D-75 Onion Downy Mildew - Sporulation of the fungus *Peronospora destructor*, cause of downy mildew, on onion leaves.



James G. Kantzes, University of Maryland

D-78 Pea Bacterial Blight - Angular lesions caused by *Pseudomonas syringae* pv. *pisi*.



Jude Boucher, University of Connecticut

D-80 Pepper Bacterial Spot Defoliation - Bacterial spot in pepper caused by the bacterium *Xanthomonas campestris* pv. *vesicatoria*.



Jude Boucher, University of Connecticut

D-81 Pepper Bacterial Spot Leaf - Bacterial spot in pepper caused by the bacterium *Xanthomonas campestris* pv. *vesicatoria*.



Jude Boucher, University of Connecticut

D-82 Pepper Bacterial Spot Fruit - Bacterial spot in pepper caused by the bacterium *Xanthomonas campestris* pv. *vesicatoria*.



Robert L. Wick, University of Massachusetts

D-85 Pepper Phytophthora - Crown rot of pepper caused by *Phytophthora capsici*.



Jude Boucher, University of Connecticut

D-88 Pepper Soft Rot - Soft rot of pepper caused by the bacterium *Erwinia*.



Robert L. Wick, University of Massachusetts

D-83 Pepper CMV - Symptoms of Cucumber Mosaic Virus (CMV) on pepper fruit.



Robert L. Wick, University of Massachusetts

D-86 Pepper Root-Knot, Field - Stunting of pepper plants caused by root-knot nematode, *Meloidogyne hapla*.



Jude Boucher, University of Connecticut

D-89 Pepper Sunscald & Alternaria - *Alternaria* commonly infects fruit that has been injured by sunscald.



John Howell, University of Massachusetts

D-84 Pepper Lightning - Dead area in pepper field caused by lightning.



Robert L. Wick, University of Massachusetts

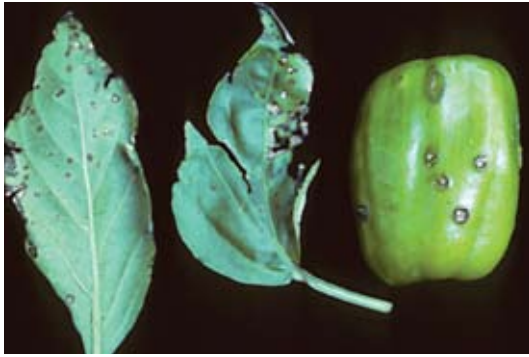
D-87 Pepper Root-Knot - Galls on pepper roots caused by root-knot nematode, *Meloidogyne hapla*.



Jude Boucher, University of Connecticut

D-90 Pepper Sunscald - Injury to pepper fruit caused by exposure to too much sun.

Diseases & Disorders



Robert L. Wick, University of Massachusetts

D-91 Pepper Xanthomonas - Bacterial leaf spot caused by *Xanthomonas campestris* pv. *vesicatoria* on fruit and foliage of pepper.



Robert L. Wick, University of Massachusetts

D-92 Pepper Xanthomonas - Spotting and blighting of pepper caused by *Xanthomonas campestris* pv. *vesicatoria*.



Robert L. Wick, University of Massachusetts

D-93 Pepper Xanthomonas - Bacterial leaf spot on seedlings caused by *Xanthomonas campestris* pv. *vesicatoria*.



James G. Kantzes, University of Maryland

D-94 Potato Early Blight - Target-shaped lesions caused by *Alternaria solani*.



James G. Kantzes, University of Maryland

D-95 Potato Late Blight - Dark brown leaf lesions caused by *Phytophthora infestans*.



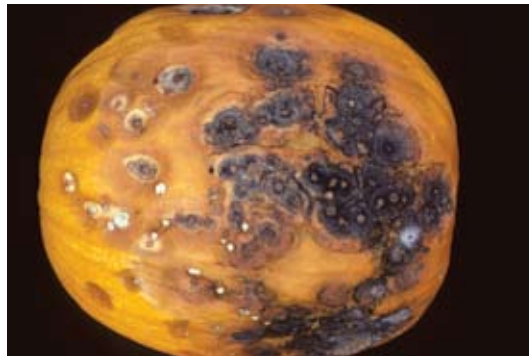
Robert L. Wick, University of Massachusetts

D-96 Potato Scab - Potato scab caused by the bacterium *Streptomyces scabies*.



Robert L. Wick, University of Massachusetts

D-97 Pumpkin Alternaria Fusarium - Secondary rot of pumpkin caused by the fungi *Alternaria* and *Fusarium*.



Robert L. Wick, University of Massachusetts

D-98 Pumpkin Black Rot - Black rot of pumpkin caused by the fungus *Didymella bryoniae*.



Wade Elmer, CT Agriculture Experiment Station

D-99 Pumpkin Fruit Fusarium - Lesions on pumpkin fruit caused by the fungus *Fusarium*.

Diseases & Disorders



Wade Elmer, CT Agriculture Experiment Station

D-100 Pumpkin Vine Fusarium - Fusarium wilt of pumpkin vine caused by the *F. solani* f. sp. *cucurbitae*.



Jude Boucher, University of Connecticut

D-103 Pumpkin Plectosporium - Lesions on pumpkin caused by the fungus *Plectosporium tabacinum*.



C. Andrew Wyenandt, Rutgers

D-106 Pumpkin Powdery Mildew - White lesions caused by *Podosphaera xanthii*.



C. Andrew Wyenandt, Rutgers

D-101 Pumpkin Mosaic Virus - Malformation of the leaf caused by a virus.



Jude Boucher, University of Connecticut

D-104 Pumpkin Plectosporium - Severe lesions on pumpkin caused by the fungus *Plectosporium tabacinum*.



James G. Kantzes, University of Maryland

D-107 Squash, Winter, Black Rot - Fruit lesions caused by the fungus *Didymella bryoniae* (the same organism causes gummy stem blight on leaves and vines).



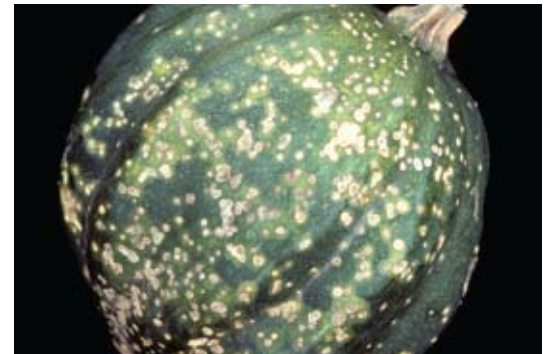
Robert L. Wick, University of Massachusetts

D-102 Pumpkin Phytophthora Fruit - Phytophthora fruit rot of pumpkin caused by *Phytophthora capsici*.



Jude Boucher, University of Connecticut

D-105 Pumpkin Plectosporium - Lesions on pumpkin vine caused by the fungus *Plectosporium tabacinum*.



Robert L. Wick, University of Massachusetts

D-108 Squash, Acorn Black Rot - Black rot on acorn squash caused by the fungus *Didymella bryoniae*.



John Howell, University of Massachusetts

D-109 Squash, Summer, Fruit Abortion - Abortion of squash fruit caused by lack of pollination.



Robert L. Wick, University of Massachusetts

D-112 Squash, Summer, Phytophthora Crown Rot - Crown rot of summer squash caused by *Phytophthora capsici*.



Robert L. Wick, University of Massachusetts

D-115 Squash, Winter, Downy Mildew - Downy mildew of winter squash caused by *Pseudoperonospora cubensis*.



Jude Boucher, University of Connecticut

D-110 Squash, Summer, Scab - Leaf lesions of squash caused by the fungus *Cladosporium cucumerinum*.



Robert L. Wick, University of Massachusetts

D-113 Squash, Phytophthora Fruit Rot - Rot caused by *Phytophthora capsici*.



Robert L. Wick, University of Massachusetts

D-116 Squash, Winter, Downy Mildew - Early symptoms of downy mildew (*Pseudoperonospora cubensis*) on the bottom of a winter squash leaf.



Jude Boucher, University of Connecticut

D-111 Squash, Summer, Scab Fruit - Fruit lesions of scab caused by the fungus *Cladosporium cucumerinum*.



Jude Boucher, University of Connecticut

D-114 Squash, Plectosporium Blight - Lesions on summer squash vine caused by the fungus *Plectosporium tabacinum*.



Robert L. Wick, University of Massachusetts

D-117 Squash, Winter, Powdery Mildew - Powdery mildew on winter squash.

Diseases & Disorders



Robert L. Wick, University of Massachusetts

D-118 Zucchini ZYMV - Mottling and distortion caused by zucchini yellows mosaic virus.



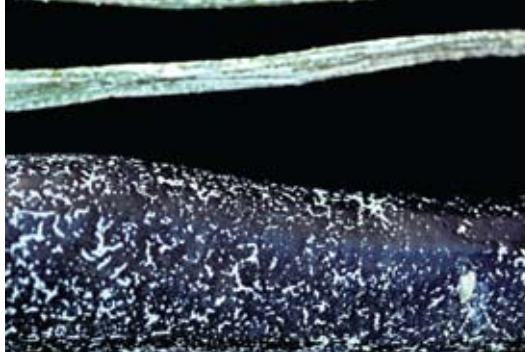
James G. Kantzes, University of Maryland

D-121 Spinach Anthracnose - Tan necrotic lesions caused by the fungus *Colletotrichum dematium* f. sp. *spinaciae*.



Robert L. Wick, University of Massachusetts

D-124 Sweet Potato Black Rot - Black rot of sweet potato caused by *Ceratocystis fimbriata*.



Robert L. Wick, University of Massachusetts

D-119 Zucchini, Plectosporium Fruit - Plectosporium blight of zucchini fruit and petioles caused by the fungus *Plectosporium tabacinum*.



James G. Kantzes, University of Maryland

D-122 Spinach Downy Mildew - Sporulation of *Peronospora farinosa* f. sp. *spinaciae* on the underside of a leaf.



James G. Kantzes, University of Maryland

D-125 Sweet Potato Pox - Soil rot of sweet potato caused by *Streptomyces ipomoeae*.



Robert L. Wick, University of Massachusetts

D-120 Radish Alternaria - Alternaria leaf spot of radish caused by the fungus *Alternaria*.



Kathryne L. Everts, Univ. MD and Univ. DE

D-123 Spinach White Rust - Chlorotic lesions caused by the fungus *Albugo occidentalis* on the upper leaf surface and sporangia on the lower leaf surface.



Robert L. Wick, University of Massachusetts

D-126 Sweet Potato Scurf - Scurf of sweet potato caused by *Monilochaetes infusans*.

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James G. Kantzes, University of Maryland

D-127 Sweet Potato Wilt - Yellowed wilted plant infected with the fungus *Fusarium oxysporum* f. sp. *batatas*.



John Howell, University of Massachusetts

D-130 Tomato Blossom End Rot - Fruit injury to tomato caused by calcium deficiency.



John Howell, University of Massachusetts

D-133 Tomato Cat Facing - Fruit injury in tomato caused by cool temperatures (below 60F) during flower bud initiation.



Robert L. Wick, University of Massachusetts

D-128 Tomato Anthracnose - Anthracnose of tomato caused by the fungus *Colletotrichum*.



John Howell, University of Massachusetts

D-131 Tomato Blotchy Ripening - Physiological disorder also known as Greywall caused by any environmental stress which slows the growth of the plant.



Robert L. Wick, University of Massachusetts

D-134 Tomato Bacterial Canker - wilt symptoms caused by *Clavibacter michiganensis*. Note with early symptoms, half of the leaf wilts first.



Robert L. Wick, University of Massachusetts

D-129 Tomato Bacterial Spot - Bacterial spot on fruit caused by *Xanthomonas campestris*, *Pseudomonas* produces small and speck-like lesions.



Jude Boucher, University of Connecticut

D-132 Tomato Buckeye - Brown water-soaked fruit spot on tomato caused by the fungus *Phytophthora capsici*.



Jude Boucher, University of Connecticut

D-135 Tomato Clavibacter - Bacterial canker on tomato stem caused by the bacterium *Clavibacter michiganensis*. This symptom can be confused with bacterial pith necrosis.



Robert L. Wick, University of Massachusetts

D-136 Tomato Clavibacter Canker - Bacterial canker caused by the bacterium *Clavibacter michiganensis*. Note the droplet of bacteria on the surface of the canker.



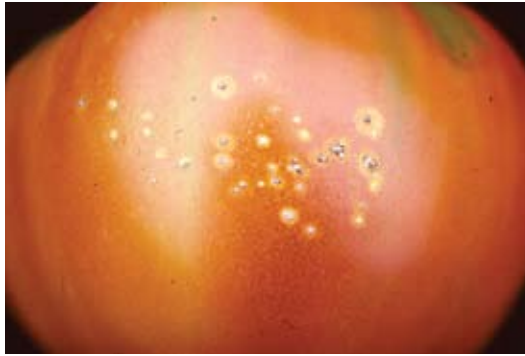
Robert L. Wick, University of Massachusetts

D-139 Tomato Bacterial Diseases - Bacterial fruit spots on tomato. Upper left, *Clavibacter*; upper right, *Xanthomonas*; bottom, *Pseudomonas*.



Jude Boucher, University of Connecticut

D-142 Tomato Early Blight Plant - Early blight caused by the fungus *Alternaria solani*. Disease develops on the lower foliage first and moves up the plant.



Robert L. Wick, University of Massachusetts

D-137 Tomato Clavibacter Fruit - "Bird's-eye" lesions on tomato fruit caused by the bacterium *Clavibacter michiganensis*.



Jude Boucher, University of Connecticut

D-140 Tomato Early Blight - Early blight caused by the fungus *Alternaria solani*. Brown to black lesions have target-like concentric lines.



Jude Boucher, University of Connecticut

D-143 Tomato Fruit Cracking - Concentric and radial cracks in tomato fruit caused by excess moisture during fruit expansion.



Jude Boucher, University of Connecticut

D-138 Tomato Clavibacter Fruit - "Bird's-eye" lesions on tomato fruit caused by the bacterium *Clavibacter michiganensis*.



Robert L. Wick, University of Massachusetts

D-141 Tomato Early Blight - Early blight caused by the fungus *Alternaria solani*. Brown to black lesions have target-like concentric lines.



John Howell, University of Massachusetts

D-144 Tomato Fruit Cracking - Concentric cracks in tomato fruit caused by excess moisture during fruit expansion.



Robert L. Wick, University of Massachusetts

D-145 Tomato Fulvia - Fulvia leaf spot caused by *Fulvia fulva*. Pale yellow spots develop on the top of the leaf, and felty greenish masses of spores develop on the bottom.



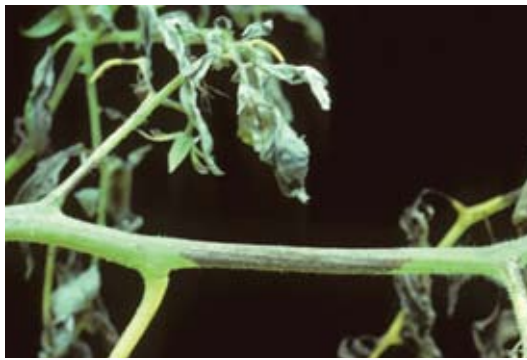
Robert L. Wick, University of Massachusetts

D-148 Tomato Pseudomonas Fruit - Bacterial speck of tomato fruit caused by *Pseudomonas syringae*.



Robert L. Wick, University of Massachusetts

D-151 Tomato Sclerotinia Fruit Rot - Sclerotinia soft rot of tomato with characteristic white mold and hard sclerotia.



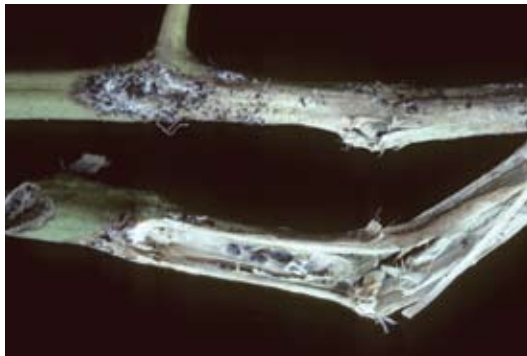
Robert L. Wick, University of Massachusetts

D-146 Tomato Bacterial Speck - Bacterial speck caused by *Pseudomonas syringae*; *Xanthomonas* causes a larger, scabby lesion.



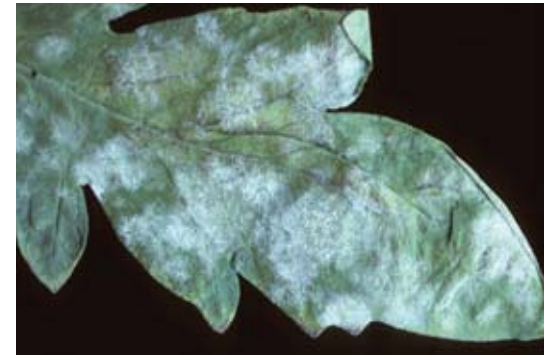
Robert L. Wick, University of Massachusetts

D-149 Tomato Pythium Fruit Rot - Fruit rot caused by *Pythium* is soft and watery. *Sclerotinia* also causes rot of fruit but sclerotia will be present.



Robert L. Wick, University of Massachusetts

D-152 Tomato Sclerotinia Stem - Sclerotinia stem canker on tomato. Note the hard, dark sclerotia inside the stem.



Robert L. Wick, University of Massachusetts

D-147 Tomato Powdery Mildew - Powdery mildew on tomato leaf.



John Howell, University of Massachusetts

D-150 Tomato Rain Check - Fine cracks that callus over in tomato fruit caused by excess moisture.



Robert L. Wick, University of Massachusetts

D-153 Tomato Septoria and Alternaria - Early blight (*Alternaria solani*) upper left leaf; Septoria leaf spot lower right.



Jude Boucher, University of Connecticut

D-154 Tomato Septoria - Septoria leaf spot caused by the fungus *Septoria lycopersici*.



Robert L. Wick, University of Massachusetts

D-155 Tomato Septoria - Septoria leaf spot caused by the fungus *Septoria lycopersici*.



Franklin Schales, University of Maryland

D-156 Tomato Southern Blight - *Sclerotium rolfsii* infection on tomato stems.



John Howell, University of Massachusetts

D-157 Tomato Stitching - Another type of cat facing caused by cool temperatures during tomato flower bud initiation.



Robert L. Wick, University of Massachusetts

D-158 Tomato TMV Fruit - Tobacco mosaic virus symptoms are highly variable. Often, no symptoms occur on the fruit. These symptoms are fairly severe.



Robert L. Wick, University of Massachusetts

D-159 Tomato Tospovirus - Tomato spotted wilt virus (TSWV) and impatiens necrotic spot virus (INSV) cause similar symptoms on tomato foliage.



Robert L. Wick, University of Massachusetts

D-160 Tomato Verticillium Wilt - Yellowing of the foliage, very typical symptoms of Verticillium wilt.



James G. Kantzes, University of Maryland

D-161 Tomato Wilt - Internal discoloration of stem associated with wilt caused by *Fusarium oxysporum* f. sp. *lycopersici*.



Robert L. Wick, University of Massachusetts

D-162 Tomato Bacterial Spot - Bacterial spot caused by *Xanthomonas campestris*. Foliar symptoms are similar to those caused by *Pseudomonas*.