



14.7 Black swallowtail; mature larva with scent glands extended.



15A.1a Bacterial blight; leaf lesions.



15A.1b Bacterial blight; pod lesions.



15A.2a Ascochyta leaf and pod spot; lesions on leaves and stem.



15A.2b Ascochyta leaf and pod spot; lesions on pods.



15A.2c Ascochyta foot rot; stem lesion.



15A.2d Ascochyta foot rot; pod lesions.



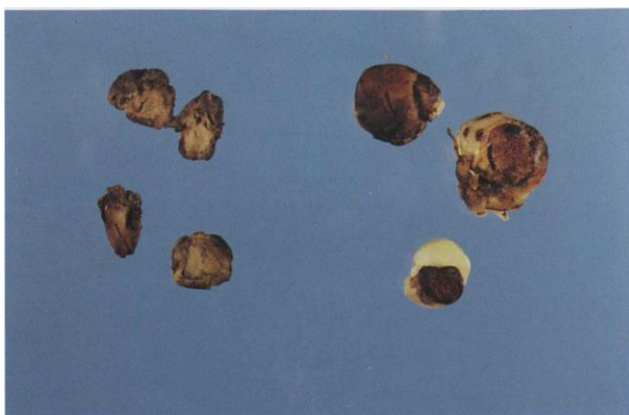
15A.2e Mycosphaerella blight; lesions on leaves and pod.



15A.2f Mycosphaerella blight; pod lesions.



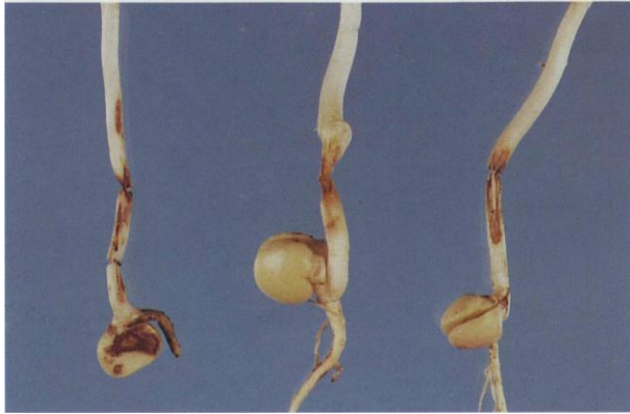
15A.2g *Mycosphaerella* blight; stem lesions.



15A.3a Seed decay; badly rotted seeds.



15A.3b Seedling blight; uneven stand caused by seed decay and damping-off.



15A.3c Seedling blight; stem lesions.



15A.3d Root rot; extensive damage in a pea field.



15A.3e Root rot; above-ground symptoms (dieback).



15A.3f Root rot; degrees of severity from healthy (left) to severe.



15A.4a Downy mildew; lesions on leaves.



15A.4b Downy mildew; sporulation of *Peronospora viciae* on undersides of leaves.



15A.4c Downy mildew; growth of *Peronospora viciae* mycelium inside a pod.



15A.5a Powdery mildew; foliar symptoms.



15A.5b Powdery mildew; leaves with small, black cleistothecia of *Erysiphe polygoni*.



15A.6 Rust; pustules on leaves.



15A.7 Sclerotinia stem rot; a wilted plant.



15A.8 Septoria leaf blotch; leaf lesions with small, dark pycnidia.



15A.9a Aster yellows; leaf proliferation.



15A.9b Bean yellow mosaic; foliar symptoms (mosaic).



15A.9c Pea enation mosaic; blisters (enations) on leaves.



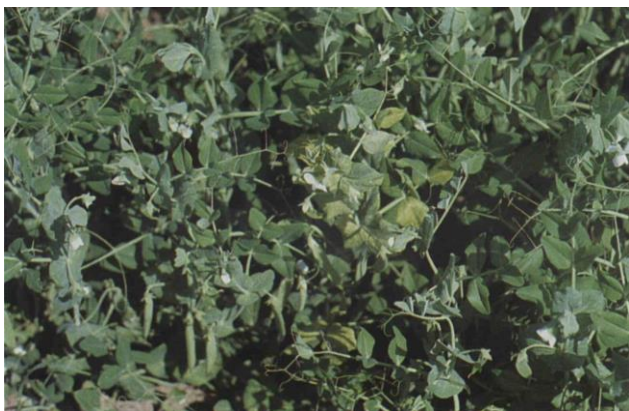
15A.9d Pea streak; leaf and pod symptoms.



15A.9e Pea stunt; foliar symptoms.



15A.9f Pea seed-borne mosaic; diseased (left), note downward cupping of leaflet margins, short internodes.



15A.9g Pea stunt; chlorotic foliage (center).



15A.10 Boron toxicity; chlorotic foliage.



15A.11a Herbicide injury; leaf chlorosis from foliar application of bentazon plus adjuvant.



15A.11b Herbicide injury; leaf chlorosis from preplant-incorporated metribuzin.



15A.11c Herbicide injury; leaf distortion from a growth regulator herbicide.



15A.11d Water congestion; healthy (left) and affected foliage.



15A.14 Pea aphid; colonies on pea leaf and pod.



15A.15 Pea leaf weevil; adult (below), length 4.5 mm; clover root curculio, adult (above), length 5 mm.



15B.1a Bacterial brown spot; leaf lesions.



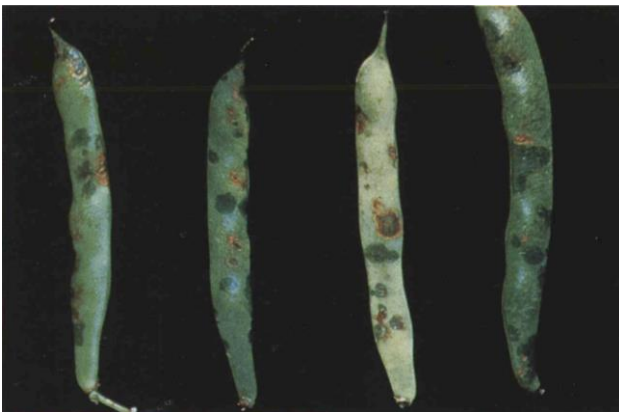
15B.1b Common blight; leaf symptoms (brown lesions).



15B.1c Common blight; leaf infection.



15B.1d Common blight; area of severe infection in a field (center).



15B.1e Common blight; pod infection.



15B.If Common blight; symptoms on infected seeds.



15B.Ig Halo blight; leaf symptoms include small, necrotic spots with yellow-green haloes.



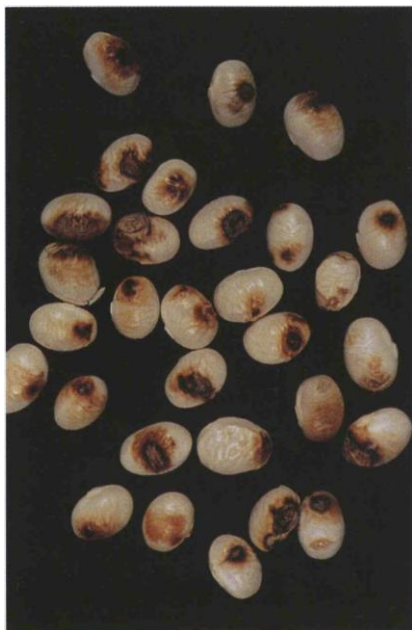
15B.Ih Halo blight; leaf infection; plants may develop systemic chlorosis.



15B.1i Halo blight; pod lesions appear water-soaked, then become red or brown.



15B.2a Anthracnose; leaf infection usually involves necrosis of veins.



15B.2b Anthracnose; severe seed infection.



15B.2c Anthracnose; lesions on an immature pod become sunken and brown with a dark border.



15B.2d Anthracnose; severe pod and seed infection.



15B.3a Gray mold; infected pod showing sporulation of *Botrytis cinerea*.



15B.3b Gray mold (right) and white mold (left); pod infections.



15B.4 Black root rot; root and hypocotyl lesions become dark brown to black; healthy (left) to severely affected.



15B.5a Fusarium root rot; dry, reddish-brown root rot symptoms; note adventitious roots on hypocotyl.



15B.5b Fusarium root rot; root symptoms.



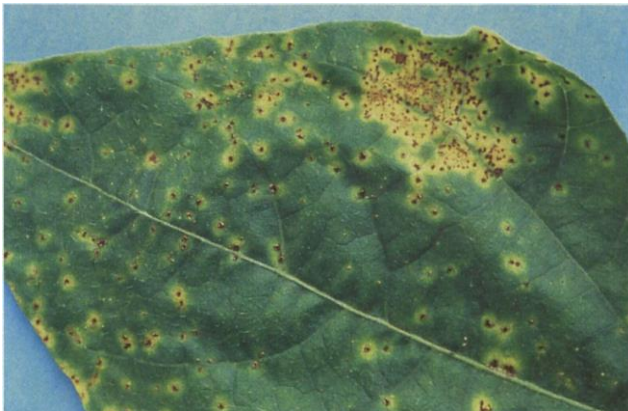
15B.5c Fusarium root rot; note leaf yellowing on affected plants.



15B.6 Pythium diseases; seed decay and seedling root rot.



15B.7 Rhizoctonia root rot; elongate, sunken, reddish-brown lesions on hypocotyl and roots.



15B.8a Rust; leaf infection; reddish-brown uredinial pustules with yellow haloes.



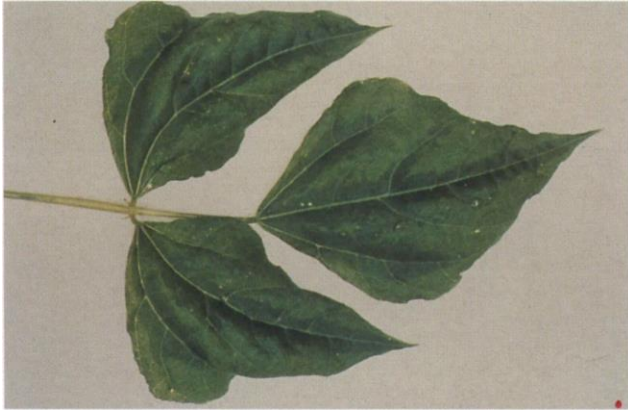
15B.8b Rust; pustules become dark brown to black as teliospores develop.



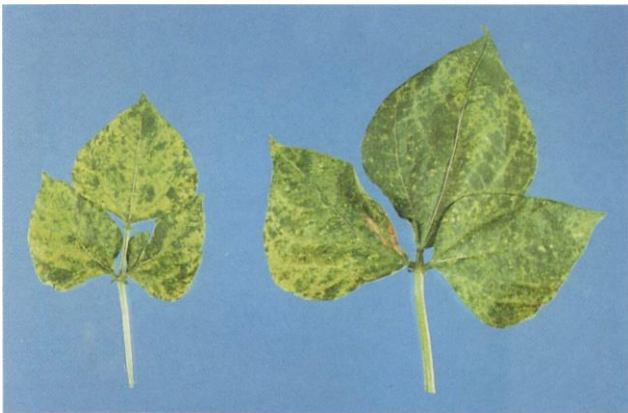
15B.9a White mold; affected bean plant (center).



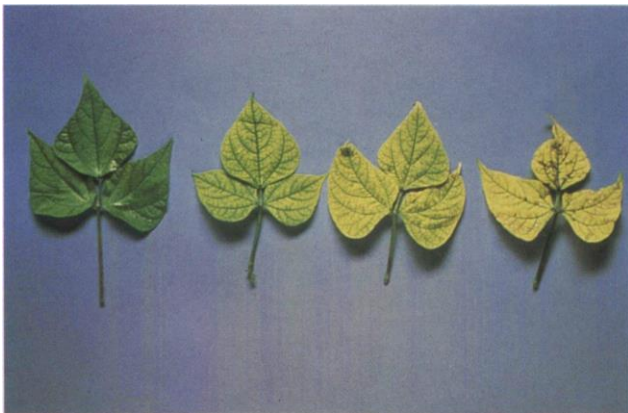
15B.9b White mold; pod symptoms, white cottony mycelium with sclerotia; healthy (bottom).



15B.10 Bean common mosaic; irregular light and dark green patches and puckering of leaves.



15B.11 Bean yellow mosaic; mosaic symptoms; some strains produce chlorotic or necrotic spots.



15B.12a Iron deficiency; healthy (left) to severely affected (right) leaves; veins remain green.



15B.12b Manganese deficiency; severe interveinal leaf chlorosis.



15B.12c Zinc deficiency; foliar symptoms (chlorosis).



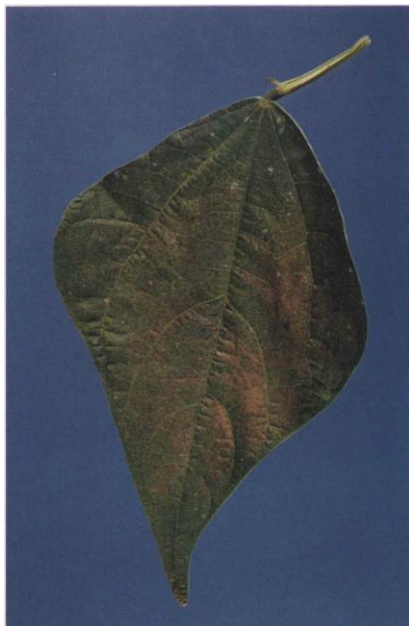
15B.13a Baldhead; growing point killed by mechanical damage to seed.



15B.13b Herbicide injury; damage to growing point from dicamba.



15B.13c Ozone injury; bronzing symptoms on leaves.



15B.13d Sunscald; a damaged leaf.



15B.13e Wind injury; note white areas on affected leaves.



15B.18 Seedcorn maggot; larval damage to roots of seedlings.



15B.19a European earwig; damage to bean leaves.



15B.19b Mexican bean beetle; adults; length 6-8 mm.