



**11.27b** Spotted garden slug; scale in inches; length  $\geq 100$  mm.



**11.27c** Gray garden slug; juvenile with severe feeding damage on dill; length 35-50 mm.



**12.1a** Stewart's wilt; pale green streaks on leaves later turn brown.



**12.1b** Stewart's wilt; affected plant.



**12.1c** Stewart's wilt; severely affected plants in a field.



**12.2a** Damping-off; root and seed decay symptoms on a seedling.



**12.2b** Damping-off and root rot; circular area (center) of plants with leaf yellowing.



**12.3a** Gibberella ear rot; characteristic pinkish mycelium of *Fusarium graminearum*.



**12.3b** Fusarium kernel rot; white mycelium (*Fusarium*) and black perithecia (*Gibberella*)



**12.3c** Ear and kernel rot; sap beetles may be vectors of *Fusarium* spp.



**12.4** Eyespot; moderately (right) and severely affected leaves.





**12.5** Common rust; uredinial pustules on affected leaf.



**12.6a** Common smut; galls (boils) on an affected ear.



**12.6b** Common smut; affected tassel with galls.



**12.7a** Head smut; affected (brush-like) tassel.



*12.7b* Head smut; phyllody (left) and teliospore formation on ear.



*12.8a* Diplodia stalk rot; dry, pale brown rot of pith causes sudden wilt.



*12.8b* Gibberella stalk rot; pink to red discoloration of stem tissues.





*12.8c* Gibberella stalk rot; healthy (left) and severely affected stalks.



*12.8d* Pythium stalk rot; dark brown, water- soaked rot causes lodging.



**12.9a** Three- to five-leaf dieback; dieback, root rot and stunting (healthy, left).



**12.9b** Three- to five-leaf dieback; dead and weakened seedlings.



**12.9c** Three- to five-leaf dieback; affected older seedlings (healthy, right).



**12.9d** Three- to five-leaf dieback; note hypocotyl and *Penicillium*-colonized seeds.



**12.10a** Maize dwarf mosaic; mosaic stippling and dark green streaking on young plant.



**12.10b** Maize dwarf mosaic; symptoms of strain B (= sugarcane mosaic virus).



**12.12a** Armyworm; injury to corn foliage.





*12.12b* Armyworm; larva.



*12.12c* Armyworm; adult moth; wingspan  $\pm$  40 mm.





*12.13a* Corn earworm; damage to ears.



*12.13b* Corn earworm; larva and damage on ear.



*12.13c* Corn earworm; larva and damage on ear.



**12.13d** Corn earworm; adult moth; wingspan 45-65 mm.



**12.14** Corn leaf aphid; leaf and tassel infestation.



**12.15a** Northern corn rootworm; adult beetle on corn silks.



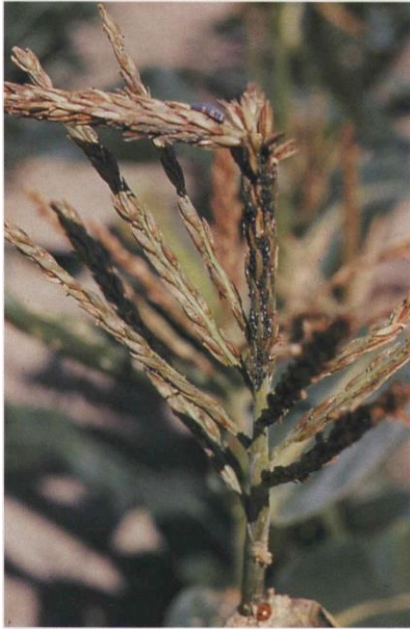
**12.15b** Northern corn rootworm; adult; length  $\pm$  10 mm.



**12.15c** Western corn rootworm; adult; length  $\pm$  10 mm.



**12.16a** European corn borer; leaf injury from larval feeding.



**12.16b** European corn borer; broken tassel; note aphids and lady beetle larva.



**12.16c** European corn borer; broken stalk from larval feeding.





**12.16d** European corn borer; lodging from larval feeding at the base of stalks.



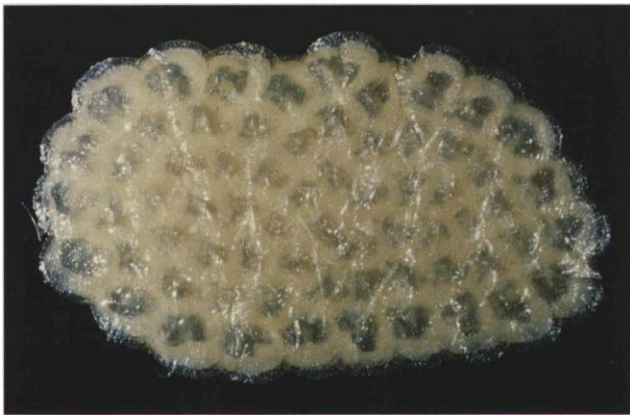
**12.16e** European corn borer; larva feeding on ear.



**12.16f** European corn borer; larva and feeding damage on kernels.



**12.16g** European corn borer; adult moth; wingspan  $\pm 25$  mm.



**12.16h** European corn borer; egg mass.



**12.17a** Fall armyworm; young larva and injury to corn silks.



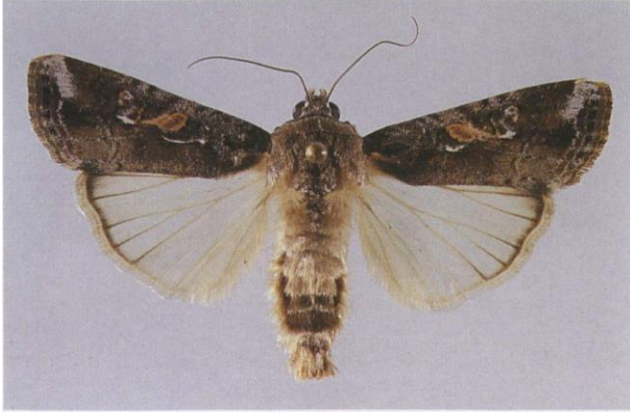
*12.17b* Fall armyworm; intermediate larva.



*12.17c* Fall armyworm; mature larva, about 40 mm long.



*12.17d* Fall armyworm; pupa (normally found in the soil).



**12.17e** Fall armyworm; adult moth (dark form); wingspan 30-38 mm.



**12.19** Four-spotted sap beetle; adult; length 4-7 mm.





**12.20a** Seedcorn maggot; larvae and damage to a germinating seed.



**12.20b** Seedcorn maggot; larva.





**12.20c** Seedcorn maggot; adult fly; length 7-9 mm.



**12.21a** Wireworm; larvae.



**12.21b** Wireworm; adult “click” beetle; length 3-30 mm.



**12.22a** Two-striped grasshopper; adult; length 25-40 mm.



**12.22b** Potato stem borer; larva on a corn seedling.