

LEAFHOPPERS

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Leafhoppers occur on almost all types of plants including forest, shade, and orchard trees, shrubs, grasses, flowers and many field and garden crops. They principally are on the leaves of their food plant. The food of most species is quite specific. Therefore, a specialist in this group of insects can determine the insect, food, or country of the specimen.

Most leafhoppers have a single generation a year. However, there are a few with 2-3 generations per year. The winter is passed either in the adult or egg stage depending upon the species.

There are many economically important pest species in this group and they cause 5 major types of injury to plants:

1) Some species on apple trees remove great amounts of sap and reduce the chlorophyll in the leaves; the leaves then become covered with very minute white or yellowish spots, and with excessive feeding the leaves turn yellowish or brownish.

2) The potato leafhopper can interfere with the nor-

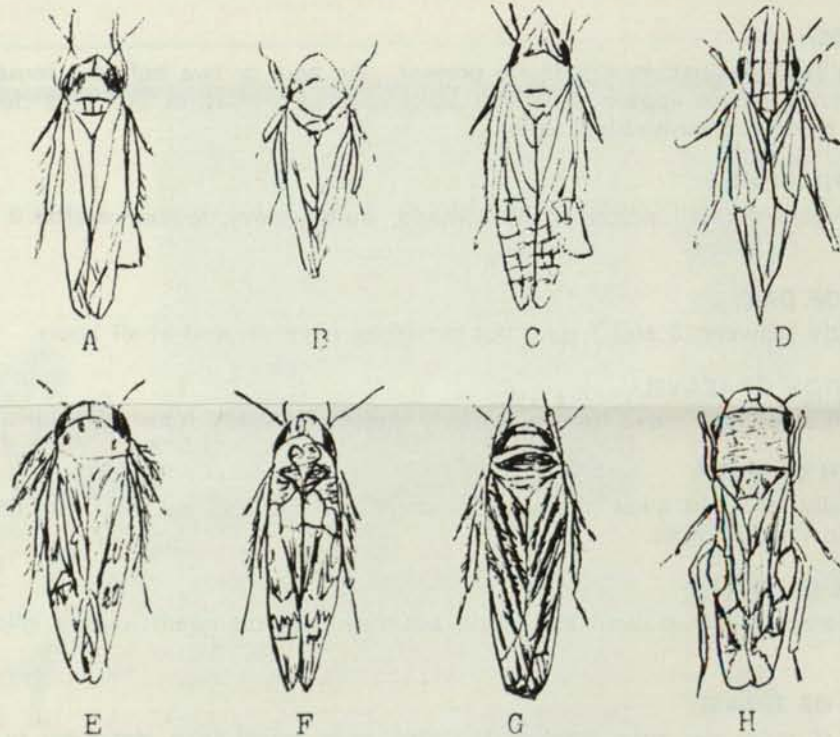
mal physiology of the plant, mechanically plugging the phloem and xylem vessels in the leaves resulting in impaired transportation of food materials. Browning of the outer edges of the leaves and eventually the entire leaf is the result.

3) Some species oviposit in green twigs resulting in damage.

4) Many species of leafhoppers are vectors of disease organisms that cause plant diseases. Examples: yellow dwarf, phony peach, disease of grape, corn stunt, aster yellows, phloem necrosis in elm, curly top in sugar beets, etc.

5) Some species cause stunting due to the inhibition of growth on the under surface of the leaves where leafhoppers feed.

For control of leafhoppers on flowers and shrubs use carbaryl (sevin) 50% wettable powder or DDT 25% emulsifiable concentrate. Spray foliage thoroughly. Repeat treatments if necessary. For control of leafhoppers on turf use carbaryl (sevin) 50% wettable powder, 8 oz./10,000 square feet or methoxychlor 25% emulsifiable concentrate, 4 oz./10,000 square feet.



LEAFHOPPERS: A, the potato leafhopper, *Empoasca fabae* (Harris); B, *Xerophloea major* Baker; C, *Draeculacephala mollipes* (Say); D, *Hecalus lineatus* (Uhler), female; E, *Circulifer tenellus* (Baker); F, *Erythroneura vitis* (Harris); G, *Tylozygus bifidus* (Say); H, *Oncometopia undata* (Fabricius). (Courtesy of the Illinois Natural History Survey.)