

more common diseases and insect pests a brief description of them follows:—

#### Fungous Diseases

**Late blight:** Late blight, caused by the fungus *Phytophthora infestans*, is one of the commonest and most destructive diseases of tomatoes and is also common on potatoes. Although widespread throughout the Dominion, it is most difficult to control in Auckland Province, where it often causes heavy losses. The disease appears first as dark brown to black areas on the leaves and may spread to stems and fruit. Infected fruit develops russet-brown marbled areas and eventually shrivels and becomes brown.

**Septoria leaf spot:** Caused by the fungus *Septoria lycopersici*, septoria leaf spot is generally more prevalent in autumn. The older leaves are usually affected first and early infection shows as small spots having a water-soaked appearance. As the spots enlarge they become more circular and the affected tissues become sunken and darker, varying from grey to brown. Control of fungous diseases is discussed in the section on spraying (page 144).

#### Virus Diseases

**Spotted wilt:** This disease, commonly called bronze top, is caused by a virus and is most serious, as there is no known control and affected plants do not recover. Infection shows first as small, pin-point, dark spots on the terminal shoots and leaves. The top of the plant soon becomes stunted, the young top leaves tend to curl downward, and little or no further growth is made. Irregular brown and bronze markings appear on the leaves as the disease progresses through the system of the plant, and fruits may show irregular mottling of lighter or yellowish colour or distinct concentric markings.

Control measures consist of removing and destroying infected plants as soon as the disease is noticed.



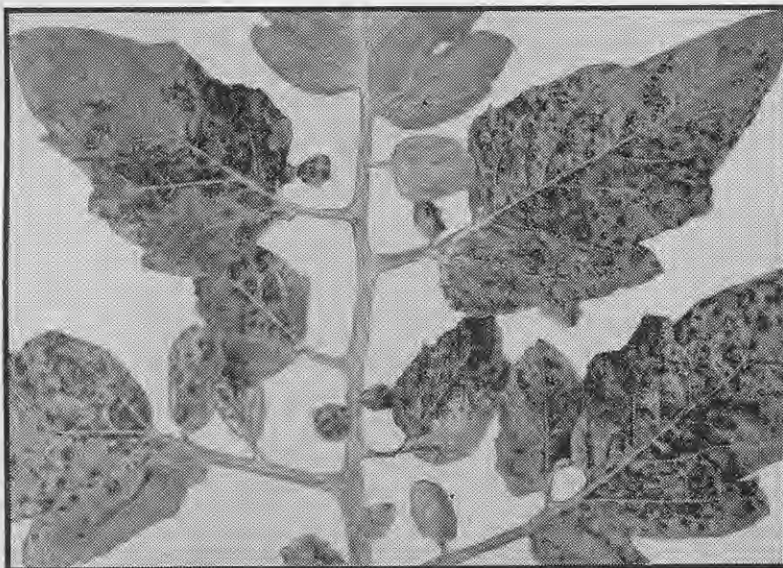
[Department of Scientific and Industrial Research  
Tomato (late) blight (*Phytophthora infestans*) showing infection on stem (the dark colouring extending upward).]

Thrips, the main agents in the spread of the spotted wilt virus, should be kept down by spraying the plants every 7 days with D.D.D. 25 per cent. wettable powder (1oz. in 4 gallons of water or combined with the copper sprays).

**Home gardeners should not confuse D.D.D. with D.D.T., which is not recommended for spraying on tomatoes, as it may cause damage, particularly in hot weather.**

**Tobacco mosaic:** This virus causes a mottling of the leaves which is sometimes accompanied by leaf distortion, especially on dwarf varieties. The mottling shows as light yellow-green irregular areas in the leaf blade tissues. The fruit is sometimes affected and may show slight irregularity or "mistiness" in the red colouring. The disease is not as serious in its effect as spotted wilt. The virus may be spread by the hands from plant to plant when laterals are being removed or during tying-up operations. Mosaic also affects tobacco and is usually present in manufactured tobacco. As it may be spread to tomato plants by a worker who handles tobacco in rolling cigarettes, such a smoker should wash his hands thoroughly before handling clean plants. Plants badly infected with mosaic should be removed and burnt.

**Cucumber mosaic:** This virus disease causes a narrowing of the leaves of



[Department of Scientific and Industrial Research  
Spotted wilt, showing typical bronzing of tomato leaves.]