

Sunflower XIV

Apical Chlorosis

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Identification and Life Cycle

Apical chlorosis is caused by the bacterium *Pseudomonas syringae* pv. *tagetis*. Although infected plants are conspicuous in the field, the disease is of little economic importance. The disease is most severe on seedlings during cold, wet weather. The pathogen can be disseminated among plants by splashing rain and irrigation water, by wind as aerosols, and by the movement of contaminated soil. The apical chlorosis pathogen is a very common resident on the leaves of many weeds and other crop plants, but also survives in the soil.

Plant Response and Damage

Apical chlorosis symptoms first appear as dramatic bleaching or chlorosis of the upper leaves of seedlings. The disease is often confused with iron chlorosis or nitrogen deficiency, but apical chlorosis, unlike mineral deficiencies, is more uniform and the affected plants never recover. Mineral deficiencies are usually accompanied by greening of the leaf veins. Yield is seldom, if ever, affected by the disease in the High Plains.

Management Approaches

Biological Control

No biological control strategies have been developed for apical chlorosis.

Cultural Control

Practice a three-year or longer rotation to avoid building up large soil populations of the apical chlorosis bacterium. Avoid excessive irrigation and water-logged soils. Some hybrids are less susceptible to apical chlorosis than others, but none are completely immune.

Chemical Control

Chemical controls are not necessary for controlling apical chlorosis.

Categories: Sunflower, Disease, Apical Chlorosis

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