

Millet

Viruses

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Identification and Life Cycle

Several viruses can infect millet in the High Plains region, including *Maize dwarf mosaic virus*, *Panicum mosaic virus*, *Wheat streak mosaic virus*, and *High plains virus*. Most of these viruses require an insect vector (certain aphids, mites, or leafhoppers) for dissemination and infection, except *Panicum mosaic virus*. Viruses survive between millet crops in their insect vectors, weeds, or alternate hosts such as corn or small grains.

Plant Response and Damage

Symptoms of virus infection vary depending on the virus strain, host, and environmental conditions, but typical symptoms are mottling, mosaic patterns, stunting, interveinal chlorosis and occasionally deformed heads. Yield loss estimates are not available for most viral diseases of millet in the High Plains region. Several viruses that infect millet, such as *Wheat streak mosaic virus* and *High plains virus*, also attack corn, barley, and wheat and can cause significant yield losses.

Management Approaches

Biological Control

Biological control strategies have not been developed for virus diseases of millet.

Cultural Control

Few cultural control strategies have been developed, but crop rotation with non-hosts such as sunflower, weed control in and around fields, elimination of volunteers, overhead irrigation, avoiding planting millet adjacent to winter wheat, and early planting dates probably help to reduce most virus diseases on millet. The purpose of all of these management strategies is to break the “green-bridge” of host plants and reduce insect vector survival.

Chemical Control

Insecticide control of insect vectors is generally not successful for virus control.

Categories: Millet, Disease, Viruses

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