

Canola and Mustard

Aster Yellows

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Identification and Life Cycle

Aster yellows is a virus-like disease caused by a phytoplasma, an organism similar to a bacterium. The aster yellows phytoplasma is vectored by the aster leafhopper, an olive-green or straw-colored leafhopper with six dark spots on its forehead. Aster leafhoppers migrate from the south, usually arriving in early to mid June. Serious outbreaks of aster yellows can be caused by large numbers of migrant leafhoppers in the spring, warm weather in May and June, and adequate precipitation and soil moisture. The aster leafhopper will not fly at temperatures below 60°F. Aster leafhopper feeding itself is not economically damaging, but the aster yellows phytoplasma is damaging. Aster yellows affects over 300 crops and weeds, including carrot, celery, cucurbits, potato, sage, tomato, quackgrass, plantain, chickory, knotweed, sowthistle, ragweed, Kentucky bluegrass and wild carrot. The pathogen survives between susceptible crops in alternate hosts or in its vector.

Plant Response and Damage

Typical aster yellows symptoms are phyllody, the transformation of floral parts into leaf-like tissues. Symptoms generally appear on scattered plants mid to late in the season. Pods of infected plants are hollow. Aster yellows is seldom of economic concern in the Central High Plains.

Management Approaches

Biological Control

No biological control strategies have been developed for aster yellows.

Cultural Control

Plant resistant varieties, if available. Control weeds in and around fields that serve as alternate hosts for aster yellows. Increasing planting population may reduce the incidence of aster yellows.

Chemical Control

Insecticides applied when aster leafhoppers populations are at their peak can reduce the incidence of aster yellows.

Categories: Canola and Mustard, Diseases, Aster Yellows

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