



MB Sunflower Crop Report

“Cutworm damage has slowed this week, with fewer plants being cut-off or defoliated. Rust pycnia has developed across the province.”

Friday June 15, 2012

Crop

Crop staging is from V-2 to V-8. Cool and damp weather has slowed crop development.

Disease

The early stages of Sunflower rust continue to develop across Manitoba. The identified stages of sunflower rust are the pycnia and aecia stages. Rust pycnia resemble a yellow-orange ‘blister’ on the upper leaf surface of sunflower leaves or cotyledons and is the first observable stage of sunflower rust. The next stage in rust development is the aecia. Aecia develop directly opposite the pycnia on the leaf underside. Aecia are a collection of orange ‘cups’ and produce spores that cause the typical rust pustules filled with cinnamon-brown spores. It takes at least a couple of weeks to for uredinia (brown pustules) to develop after the onset of pycnia.

Development of pycnia this early in the season does not mean we are facing an epidemic, but rather it is an indication that the pathogen overwintered and that scouting is important throughout the season. Severity of infection is weather dependent and the crop will be monitored closely as the disease develops. Wild sunflowers are a host for sunflower rust.

Downy Mildew is present at low levels. Typical symptoms include yellowing of the leaves, and white fungal masses on the leaf underside. Sunflower plants are susceptible to infection when the roots are less than 2 inches in length. Cool, water saturated soil during the early stages of plant development favors infection. No rescue treatments are available.

Weeds

Herbicide applications have commenced in early planted fields. Smartweed and barnyard grass are thriving in the wet conditions in the south west and central areas of the province. It is import to time herbicide applications to minimize crop injury and maximize weed control.

Insects

Cutworm damage has slowed this week. The reduced activity is due to several reasons including larvae outgrowing the early instar stages of heavy feeding and fields developing past the susceptible growth stages.

Limiting Factor Moisture



Figure 1. Downy Mildew causes discolorations and dwarfing of sunflower plants.



Figure 2. Lower leaf surface on downy mildew infected plants exhibit a white cottony growth of fungus.



Figure 3. The yellow-orange ‘blister’ like rust pycnia develops on the upper leaf surface. It is not always possible to find this rust stage.



Figure 4. Directly opposite the pycnia (figure 3) on the lower leaf surface forms aecia. They resemble orange ‘cups’.