



*“The **economical stage of rust** (brown uredial pustules) has developed...14-21 day timeline from first sign of infection to development of economical stage.”*

Manitoba Sunflower Crop Report 6

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Crop Stage

V-8 to R-1. Varying soil temperatures this week, 13-20°C.

Weeds

Last in-crop tillage operations taking place. Some fields still have moderate to heavy weed densities in row.

Insects

Sunflower Bud Moth found in a few fields across the province. Black frass (excrement) is visible on the plant, which is the entrance hole of the larvae. With the majority of crops at R-1, larvae are being found tunneling into the stem near the developing bud which will likely affect its development. The larvae remain buried in the stem to feed then pupate near the entrance hole where second generation adults emerge. Unfortunately, no control options have been developed.

Young sunflower beetle larvae have been observed in the *Central* region. Larvae can be found hiding behind the leaves, in the leaf axils or buried in the bud. Adults are also still present and feeding. Feeding can cause significant defoliation and since larvae will be emerging and feeding throughout July, it is important to monitor regularly.

Diseases

The economical stage of rust (uredial pustules) has developed in the *Western* region. The early stages were first detected the week of June 22, giving a timeline of approximately 14-21 days from first sign of infection to development of economical stage. The infection was assessed at 2-4% on 1st/2nd leaves and 0.5% on 3rd/4th leaves.

(see picture on page 2). **Continued on page 2...**

Scouting Images



Black frass in developing bud indicating presence of Sunflower Bud Moth.



Sunflower Bud Moth larvae - found after peeling back stem tissue at entrance hole.



Sunflower beetle adults and larvae. Source: www.forestryimages.org



Manitoba Sunflower Crop Report 6 Continued...

Diseases cont'd...

Infection has not yet developed on upper leaves. Multiple stages of rust were present on many plants. Since June 22, rust has been found (at various levels of infection) in 100% of fields surveyed in the Western region, 55% of fields in the South Central region and 45% of fields in the North Central region. Keep in mind that the economical stage of rust has only been observed in one field, thus far. Do not panic but rather get out there and scout your field - early detection is critical! Yield losses can be significant.

The Pesticide Management Regulatory Agency (PMRA) should announce its decision on the emergency use registration for Headline® to the NSAC by July 20th. Upon registration, treatment is warranted at first signs of infection on upper four leaves .

Low levels of downy mildew have been found in many fields (<5% incidence), even in fields sown to a downy mildew resistant (DMR) variety. Incidence may increase due to recent and expected rains this week keeping the soils wet.

Lodging has been observed in regions where high winds were experienced last week.

Disease.



Rust infection - the brown (uredial) pustules are the devastating stage of sunflower rust.
Left: 3rd/4th lower leaf rated at 0.5% infection. Right: 1st/2nd lower leaf rated at 2-4% infection.

Current Crop Limiting Factors

Scouting Images