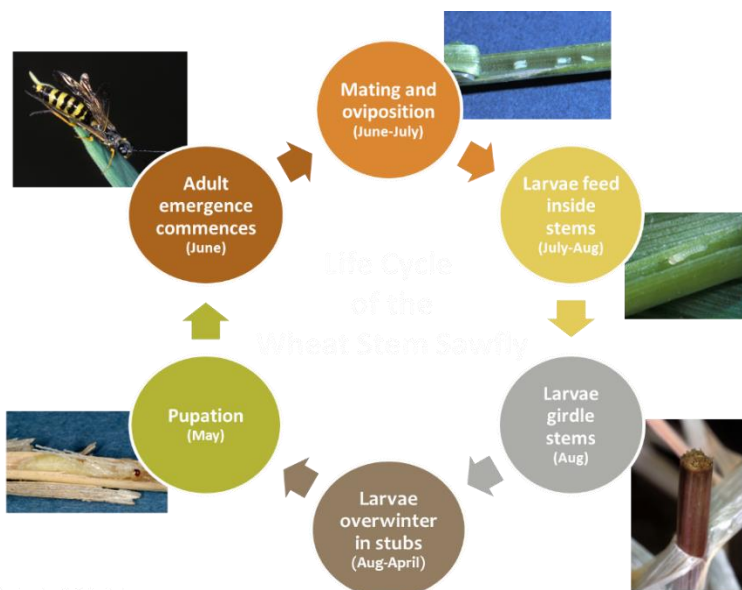


## Wheat Stem Sawfly

Estimated economic impacts of wheat stem sawfly (WSS), *Cephus cinctus* Norton (Hymenoptera: Cephidae) for individual farmer in the most productive winter wheat regions in Montana in 2012 were reported to be between \$110,000 and \$120,000, representing losses of seven bushels per acre. Despite the long history of incidence wheat stem sawfly in this region, constant adaptation of this pest to changing environmental conditions and human behaviors continue to present challenges to

### Life cycle in Montana



<http://www.entomology.montana.edu/sawfly/biology.htm>  
Photo courtesy: R.K.D. Peterson

*For more details, please contact the entomology team at WTARC*

### Damage

Adult sawflies do not cause direct injury on host plant but stem boring activity of larvae can cause extensive losses to the plant in two ways

- Reduction in kernel weight due to reduction in photosynthetic capabilities caused by larval damage to plant's soft tissues
- Late-seasoning stem girdling by mature larva and subsequent stem lodging

### Sawfly research in 2013 at WTARC

Evaluated the efficacy of entomopathogenic nematodes, fungi and low-risk insecticides against WSS. Results showed treatments with these have higher yield production and better control of WSS compared to the untreated control and water spray.

### Ongoing research work at WTARC

Evaluating the effect of different species of entomopathogenic nematodes against WSS at two different times

- 1) Application of nematodes on wheat plant soon after egg hatching (June-July)
- 2) Application of nematodes to the wheat stubble after harvest during fall