Russian wheat aphid (RWA)
Kevin Wanner

The Schutter Diagnostic Lab at MSU has received samples of winter wheat with symptoms of Russian wheat aphid (RWA) damage. RWA's inject a toxin into the leaf while feeding on the sap, causing additional damage. Symptoms include long white, purple or yellowish streaks in the leaf, and the leaves may not unroll, producing a tube-like appearance. Mild winter and spring conditions may have favored survival of overwintering populations. As the growing season progresses, small grain crops should be monitored for this damaging aphid pest.

Leaves infested with RWA may not unroll (photo courtesy of Jeff Farkell, 2014).

Within the rolled leaves, RWA feeding can produce white and yellowish streaks in the leaf (photo courtesy of Jeff Farkell, 2014).

Identification: RWAs are mostly green in color, and can be distinguished from other cereal aphid species using a hand lens. RWAs have short antennae with dark tips and a "double tail" at the tip of the abdomen. The attached MontGuide MT200503AG provides a key for identifying cereal aphids.

Management: Management guidelines including insecticide recommendations are provided in the High Plains IPM Guide:
http://wiki.bugwood.org/HPIPM:Russian_Wheat_Aphid

Treatment thresholds:
Based on plant damage (HPIPM)

Crop Stage	Level at which aphids should be treated
Fall	
Any growth stage	10-20% damaged plants
Spring	
Regrowth to early boot	5-10% damaged and infested tillers
Early boot to flowering	10-20% damaged and infested tillers
After flowering	More than 20% damaged and infested tillers

Based on aphid numbers (http://www.ipm.ucdavis.edu/PMG/r730300211.html)

Plant Growth Stage	Number of Aphids per Plant or Tiller
two leaf	5 (per plant)
early tillering	5 (per tiller)
late tillering	10 (per tiller)
first node	10 (per tiller)
boot	20 (per tiller)
head exertion and later	30 (per tiller)

Additional fact sheets are attached for reference.