**Wheat development**

Michigan's wheat crop continues to look strong. According to the National Agricultural Statistics Service survey, respondents reported 72 percent of the crop to be either good or excellent. The MI Wheat Watchers scored the crop as a respectable 8.4 out of 10. Currently, much of the crop ranges from first joint to full flag. It's interesting to observe the wheat head during the jointing stage. Here the extricated immature head from a young stem, though well developed, is two weeks away from emerging naturally.

**Growth stages 7 and 8 (aka 2nd node & early flag)**

Growth stages in MI are mostly ranging from first joint (g.s. 6) to early boot. Pictured here are 2nd joint (g.s. 7) and early flag (g.s. 8). Note that number 4 leaf originates at the 1st node. Counting up from there, the flag represents the 1st leaf.

Once the flag begins to emerge, few sprays should be applied with the exception of fungicides and, if necessary, rescue micronutrients. Any injury to the flag leaf should be avoided.
Foliar disease update - watch for Stripe rust

In Michigan, the most common early-season foliar diseases include powdery mildew (figure 1) and Septoria leaf spot (figure 2). These diseases have been evident as early as last fall in some fields, but weather conditions have allowed only modest development to date. In early June, other foliar diseases may appear including Stagonospora leaf blotch and leaf rust.

Fig. 1 - Powdery
Fig. 2 - Septoria leaf spot mildew

This season, a relatively new rust disease called stripe rust (figure 3) is of special interest. This is because 1) the pathogen can be particularly aggressive with the potential of robbing at least a third of the crop in severe cases; 2) it was found at multiple location in Michigan during the first few days in May - a month earlier than in past years giving it extra time to develop and disseminate spores; and 3) about a third of Michigan varieties have limited resistance against this disease.

Fig 3 - Stripe Rust

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