

Soft Winter Wheat

notes and observations for Michigan

MICHIGAN STATE UNIVERSITY Extension

July 2, 2015

Wheat progress

I'm told the southern tier counties may see some harvesting beginning next week. Here in the northern thumb, most wheat is still at late milk to early dough so we are a couple weeks away. In fact, some fields within a mile of Lake Huron, and presumably northern MI., are still at late flower (see picture from Kyle McCarty; note viable yellow anthers on lower head).



Harvest may be postponed somewhat by the moderately cool temperatures and adequate soil moisture levels. This should be good for prolonging the grain fill period for wheat in central MI and

translate into higher yields especially for those fields having adequate disease protection.

Harvest may be extended even more than usual across MI. There may also be several days of difference between fields within the same region as development from field to field varies widely.

Foliar disease development

Having had the opportunity to travel some of the other wheat region in the state over the past month, I am seeing plenty of leaf diseases. Leaf spots (Septoria and Stagonospora) have been dominant, however leaf rust and some powdery mildew can also be readily found. Others from MSU have noted a bit of striped rust as well. The difference between fungicide treated vs. untreated is striking. I think we will see significant differences in yield. In some of my field trials and a few commercial fields, I am surprised to see that the late fungicide applications were not always adequate in protecting the flag leaf.



Prospect of high DON levels

While not inordinately high, Fusarium head scab symptoms seen across the state are of concern. Observers are reporting anywhere from 1 to 10 scabby heads per 10 foot of row. *[I suggest that we may have averaged about 1 head per foot of row last year and ultimately resulted in very few high DON levels]* These head numbers represent disease



"incidence". It includes heads that have any amount of scab (note picture of scabby heads with symptom on single spikelet, upper spikelets or entire spike; relative to disease "severity", the heads represent approximately 5, 50 and 100 percent, respectively). Current levels of scab symptoms in fungicide-treated wheat are not alarmingly high, but its important to remember that the incidence and severity of scabby

heads is a very imperfect way to predict DON test levels. It is possible that the symptoms lead to an underestimation of DON levels at harvest due, in part, to infections that initiate or spread within the head late in the grain-fill period or where conditions remain favorable for DON development until the grain dries to about 18 percent moisture. In any case, growers should brace themselves for potentially high levels in some fields.

Steps to minimize DON levels

Precautionary measures against high DON wheat should be employed until grain testing can confirm actual levels. Most worthwhile steps address the reduction of small kernels and chaff as these contain the highest DON levels.

- 1) Maximize threshing efficiency by going through the machine to make appropriate adjustments. Operators would do well to revisit the operator manual and/or an equipment representative to insure optimal settings, particularly related to the concaves.
- 2) Avoid overworking the combine as it will decrease threshing efficiency and, again, result in more chaff in the load. In general, many growers would likely do well to slow ground speed.
- 3) Use maximum fan speed to help minimize light material (shrunken kernels and chaff) when entering a new field. If testing confirms low DON levels, return to recommended fan speeds to lessen harvest losses.
- 4) Areas of the field having greater scab symptoms should be harvested and loaded separately. Unless a grower has scouted and knows differently, the grain from the field perimeter, especially along wooded fence rows and headlands, should be loaded, delivered and tested separately from the main field. If storing on-farm, do not store high DON loads with low testing grain.
- 5) Start harvesting each wheat field as soon as possible. This might mean starting when the grain is 16 to 22 percent moisture depending on variety and combine. Again, this measure can be relaxed somewhat once it is determined the field's DON levels are low.
- 6) Dry grain as soon as possible as DON can continue to develop in wet grain.

Reminder - Free diagnosis

The MSU diagnostic lab. is offering free wheat diagnosis again this season thanks to funding from the MI Wheat Program. Search MSU Diagnostic Lab to reach their website and click on forms. This should provide the [submission form](#) and instructions for taking wheat sample and shipping the sample.

Newsletter sign-up: *by email:* [click here](#); *by text:* type **22828** as address, and *miwheat* as message (you will receive a text asking for your email address)

Martin Nagelkirk, MSU Extension
nagelkir@msu.edu; pH: 810-404-3400
wheat information site:
<http://fieldcrop.msu.edu/wheat/>