

Soil-borne Wheat Disease Expands

The wheat disease, soilborne wheat mosaic virus, has made itself known this spring in parts of the Walla Walla Valley in southern Washington and northeastern Oregon. This is the second time it has appeared, but this time it is more noticeable and wider spread than 2 years ago according to local crop consultant Jerry Zahl of Walla Walla. Two years ago affected areas were small and limited to low lying areas. This time around more fields are affected and larger areas are showing symptoms. Spofford area near Milton-Freewater, Oregon and in the Mill Creek and Russell Creek areas east of Walla Walla, Washington are again seeing the disease.

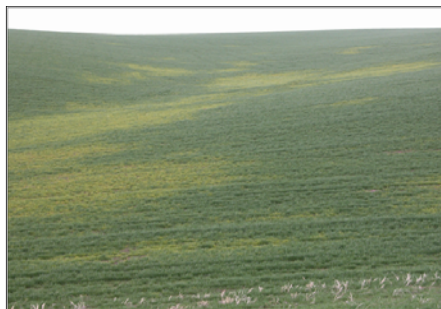
The impact of the virus on the affected areas is unknown at this time and will be determined largely by the weather and related growing conditions this coming spring.

The diseased wheat foliage exhibits mosaic symptoms similar to wheat streak mosaic, which is already known to occur in the region, but wheat streak mosaic is expressed later in the growing season.



Soilbourne Wheat Mosaic Virus, March 2008

In Oregon, this virus was first detected in winter wheat in the Willamette Valley in 1994 and in winter wheat in western Umatilla County in 2005 and 2006. The disease is transmitted from root to root by the fungus *Polymyxa graminis*. It is a virus that is only moved by soil, and likely to be a problem in years when cool moist conditions occur



Infection of Soilbourne Wheat Mosaic Virus

in the fall after seeding as moisture is needed for the infection to take place.

“Some PNW wheat varieties are likely to have resistance to the disease,” according to Jim Peterson, OSU

Wheat Breeder, because their parent lines come from areas where SBWM has been a problem for a number of years. Several growers have already observed a difference between varieties which lends supports this idea.

Peterson is working with John Moffatt, AgriPro Breeder, to complete a screening trial of current PNW varieties for resistance. This screening will help identify susceptible and resistant varieties. In another year they will be able to make recommendations for current varieties and will start to incorporate selection for resistance into their breeding programs.

For now in the PNW control options are limited to sanitation between fields since the pathogen can be transmitted from field to field on soil clinging to equipment. Once a field has the virus it will always be there as it does not need a wheat crop to survive. Other management options are unlikely to be helpful. –MKC

Sources:

Dr. Dick Smiley, Columbia Basin Ag Research Center
Dr. Tim Murray, WSU Department of Pathology
Dr. Jim Peterson, OSU Wheat Breeder, Corvallis, OR

New Xerpha – New experiences.

The new winter wheat variety, Xerpha, is experiencing some of the vulgarities that Mother Nature can throw at her here in the Pacific Northwest. Various reports from across eastern Washington show an assortment of responses to the growing conditions created by above average temperatures in February, followed by a couple of weeks of cold weather. Tim Paulitz, USDA ARS plant pathology researcher, noted some brown discoloration, and browning of the subcrown internodes in some fields of Xerpha in the Ritzville/Lind area last week. Additional field experience with this new variety will tell us a more complete story of its suitability for different growing conditions found across eastern Oregon and Washington, until then we will continue to gather information and see what the final outcome is at harvest time.

While some concerns were raised about the discoloration being from intolerance to herbicide applications, feedback from both Dan Ball and Joe Yenish, university weed scientists, is that current research indicates a good level of crop safety if label precautions are followed. More studies are underway and additional information will be available perhaps later this spring.

Xerpha, released in 2008, is adapted to a broad range of production areas and consistently ranks among the top cultivars in all agronomic categories in the PNW. It was released as a replacement for Madsen and Eltan based on its high grain yield potential, test weight, cold tolerance, and high-temperature adult-plant resistance to local races of stripe rust.

With wheat development still ahead of “normal” we continue to see the potential for impact to our local wheat fields from late spring frosts, but for today we are happy with recent rain showers and the continuing advance of spring. We just keep glancing over our shoulders at the fresh snow each morning on the Blue Mountains, keep our thermal coveralls handy and wait for warmer temperatures to return.