

Head Scab Causes A Fuss In Southern Illinois: Solutions In The Works

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Fusarium head blight or head scab was prevalent in southern Illinois this year in the winter wheat crop. Dr. Carl Bradley, extension plant pathologist with the University of Illinois recently discussed the extent of the damage and what farmers can do to help manage scab next year.

A wheat disease survey was initiated and scab was found in every field scouted. Southern Illinois is where the majority of the wheat is grown for the state and the incidence has ranged from five percent to nearly one hundred percent of the heads infected in some fields.

Bradley said, "Late in the season, about the only thing a grower can do if they know they have a lot of scab is to increase the fan speed. When they bring the combines out they can hopefully blow a lot of those infected kernels out the back to get rid of low test weight kernels and some of those kernels that might contain deoxynivalenol. If you have high levels of this toxin you can get docked at the elevator."

Fusarium head blight or head scab is caused by the fungus *Fusarium graminearum* which creates the toxin deoxynivalenol.

The incidence of Fusarium head blight is strongly associated with moisture at the time of flowering (anthesis), and the timing of rainfall, rather than the amount, is the most critical factor. Furthermore, deoxynivalenol contents are significantly affected by the susceptibility of cultivars towards Fusarium species, previous crop, tillage practices, and fungicide use.

"I always tell growers that the best management for scab occurs prior to planting and that's choosing the right variety", said Bradley, "There are some varieties that have moderate resistance, but we don't have any varieties that have complete resistance."

In a year that conditions are favorable to scab, it is difficult to control only using a variety that has moderate resistance. In these years a fungicide may need to be applied as well. Information about how susceptible a variety might be is available on the University of Illinois variety testing website at <http://vt.cropsci.illinois.edu>.

Bradley said, "Last year, Dr. Fred Kolb, professor of plant breeding, and I initiated a study which we're continuing this year. We are looking at different varieties, applying different fungicides on those varieties and looking at the control of Fusarium head blight. We found that if you combine varieties that have a higher level

of resistance and apply a fungicide to those you're going to reduce the deoxynivalenol levels even more. In those high disease environments you'll also have higher yields."

Bradley says that in years like this, 2009, it is important for growers to be using the varieties with the highest levels of resistance and then apply a fungicide if they need to.

According to Bradley, Illinois was not the only



Dr. Carl Bradley, Extension Plant Pathologist with the University of Illinois recently discussed the extent of the damage from head scab and what farmers can do to help manage scab next year.

Photo by John LaRose, Jr.

state that had been affected. Kentucky, Tennessee, Virginia, Arkansas and southern Indiana have all been affected. He feels it will unfortunately impact the amount of good quality wheat that may be available this year.

Bradley said, "Much of this work was funded by the U.S. Wheat and Barley Scab Initiative which is a federal program and that has also provided support for multi-state research to reduce the impact of Fusarium head blight. Information can be found on the U.S. Wheat and Barley Scab Initiative website at www.scabusa.org. I have also published information on our University of Illinois Crop Development and Pest Bulletin which is available at: ipm.illinois.edu/bulletin." Δ

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