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Inside This Issue:

Stratego Foliar Fungicide Labeled for Wheat

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About the 20th of July, 2000, Novartis quietly received a wheat label for the product Stratego. However, subsequent to getting this label, Novartis merged with Zeneca, the manufacturer of Quadris, which also has a wheat label. During the merger between Novartis and Zeneca (to become Syngenta), Novartis acquired Quadris and, in turn, divested itself of Stratego. At that point, Stratego was picked up by Bayer who is now offering the product for sale nationally for use on wheat. Confused? Me too, but the above is an accurate description of what events transpired to bring Stratego to Bayer, and raise Syngenta out of the merger between Novartis and Zeneca. The net impact of the formation of Syngenta on the wheat fungicide market is that Syngenta now holds the labels for both Tilt and Quadis and Bayer holds the label for Stratego.

So, as of this writing, there are now three main foliar fungicides that may legally be applied to wheat. Tilt, which everyone is familiar with, Quadris and Stratego. Quadris received a wheat label before the 2000 growing season, but very little product was used in Kentucky due to the established use patterns for Tilt, and the unacceptably high price (under current wheat economics) of Quadris. Syngenta may opt to sell Quadris at a lower price, but as of this writing I do not know if that will be the case.

Stratego is a mixture of Tilt and Flint (very similar to Quadris). Because of the Tilt component in the mix, Stratego has the same time of application restriction as Tilt. That is, product cannot be applied later than Feeke's stage 8 (flag leaf emergence). Unlike Tilt, however, Stratego has a plant back restriction which (at least for now) precludes double crop soybean being planted the same season Stratego is used. You may recall that Tilt had this same label restriction years ago and it was eventually removed as a barrier to application. Similarly, Bayer is working feverishly to get this restriction lifted from the existing Stratego label, but my Bayer contact says that it is unlikely that the restriction will be lifted in time for the 2001 growing season. Obviously, in a state like Kentucky where almost all harvested wheat acres are planted to doublecrop soybean, this is a serious label restriction.

Based on my experience and my perusal of the literature, Stratego will do an excellent job in the control of leaf rust, and various fungal leaf spot/blotch diseases. It will be the weakest against powdery mildew. Please note, that as with all fungicides, early application may result in poor disease control if sufficient fungicide active ingredient is not present in and on crop tissue at the time disease develops. This situation is very common when fungicides are applied well before crop heading, but disease develops during the post heading period.

Price, availability, and a relaxing of the doublecrop soybean restriction will be the main factors that determine whether or not Stratego will be a major competitor to Tilt in Kentucky. It is my understanding that Stratego will be competitively priced with Tilt.

I will keep you updated as new information becomes available.

Did Recent Cold Temperatures Damage the Wheat Crop?

Jim Herbek—Extension Grain Crops Specialist

Cold temperatures on March 26 and 27 has caused some concern about freeze damage to the wheat crop. Wheat had broken dormancy and resumed growth so there was some young, tender tissue. Potential damage is still being assessed. We are likely to see some chlorosis and burning to the leaf but that is not a great concern. The wheat plant will shoot out new leaves and resume growth without any permanent damage or effect on yield potential.

The real concern is damage to the growing point which is the developing wheat head. If it has been damaged to the point of being killed then that is a concern because it will not develop grain.

At least three factors must occur for freeze damage to the growing point. Temperatures have to be around the mid 20s (24 degrees F) or lower to cause damage to the growing point. Temperatures dipped to those levels on March 26 and March 27 when they got down to 18 to 20 degrees.

The second criteria is that those temperatures must be maintained for at least two hours to cause damage. Records show that at the UK Research and Education Center in Princeton temperatures were at 24 degrees or lower for five to six hours so there was enough time for the freezing of the tissue to occur.

The third criteria is that the plant has to be at a susceptible growth stage for freeze damage to occur to the growing point. When a plant has joined (referred to as when the growing point has moved above the soil surface), it becomes more susceptible to cold temperatures. Fortunately, most of the wheat had not yet jointed or was at initial joint. As a result we should not have had extensive damage to the majority of the state's wheat crop. The only concern may be in the southern tier of the state where wheat growth was more advanced.

There were some fields in initial joint (where the growing point was at or slightly above the soil line). If it was at soil level, the growing point probably was not damaged. Soil temperatures were above 42 to close to 50 degrees which was probably warm enough to buffer air temperatures at the soil line. In fields where growth was more advanced and the joint (growing point) was two to three inches above the soil line would be my concern where damage may have occurred.

To determine damage split the stem and look at the growing point through a magnifying glass.If the head is glossy looking, a white to light green in color and is very turgid, damage likely did not occur. If you see that it is a cream to tan color and is flacid and limp and not increasing in size, it is probably killed. Also look at the stems to determine if these have been frozen. It is hard to tell healthy tissue from damaged tissue right away so it is best to wait 7 to 10 days before checking the crop. Refer to U. of Ky. Publ. ID-125 "Wheat Management in Ky" for pictures of freeze damage.

If you detect damage, take a random sampling of the stems and determine what percentage have been damaged.If slightly damaged, 20 percent or less, it will still produce a good yield. The stems (tillers) not damaged will continue to develop and produce grain heads.

Fortunately, the cooler temperatures this spring held back the growth of wheat or we would have had more extensive freeze damage. The last two springs (1999 and 2000) were very warm and had greatly advanced wheat growth. If the cold temperatures we experienced on March 26 and 27 had occurred the last two springs, we would have had severe, widespread damage to the wheat crop in 1999 and 2000.

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