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Corn Fungicide Application: We are now entering that time of the year in which we will be faced with the decision to spray our corn with a fungicide. Last year, I thought it was an easy decision to apply fungicides to corn (the new crop futures market was extremely high, most fields looked excellent with high final corn stands, and disease pressure was very high).

This year, we are faced with a tougher decision: (new crop futures market is low, most fields have some sort of water damage with generally lower final stands than what we were hoping for, and on top of all of this; disease pressure is already relatively high). As we continue to receive timely rains and heavy morning dews; Anthracnose Leaf Blight, Gray Leaf Spot, and Common Rust will continue to spread. Here are a few thoughts that will either help or confuse you more in your decision making process:

- I do believe that our corn crop will be at a high risk from losing yield this year do to the **high potential** of foliar leaf diseases and stalk rots because of the consitent rainfall, heavy morning dews, and moderate temperatures that we are experiencing in the Hancock, McDonough, and Henderson County areas.
- Late planted corn will be more suceptible to fungal diseases vs. early planted corn. Fungal diseases spread when enviromental conditions are ideal, irregardless of the corn growth stage. For argument sake, letôs say hybrid ñAò was planted on April 20th and May 20th; and around June 20th is the start of when the enviroment is ideal for fungal diseases to flurish. The May 20th corn is more suceptible to disease vs. the April 20th corn becacuse the infection occurs in an earlier corn growth stage that can infect and spread within the plant longer throught the remainder of the cornôs life cycle (there is the potential of more ñvolumeò of disease present through grain fill in the late planted corn vs. the early planted corn).
- The poorest natural plant health hybrids will be at most risk, whether they are planted corn on corn or on soybean stubble. **Although, I have also seen that good natural plant health hybrids also increase yield with a fungicide application. Natural plant health can only take you so far in a heavy disease pressure year.**
- Ideally, the timing of fungicide application should occur after the field reaches full tassel emergence. This is to allow all of the upper leaves to be fully expsoed to capture the fungicide. Also, the fungicide needs to be applied before a lot of the diseases spreads above the ear leaf. However, many fields have patches of small, stunted corn that is

delayed in maturity due to excessive water, compaction, and/or nitrogen loss. These areas have already experienced significant yield loss that fungicides cannot fix. **I would concentrate on the best looking MAJORITY of the field for the timing of the fungicide, and don't worry about the lower yield potential of the minority that is lagging behind.**

- Corn on corn fields could experience higher disease pressure, but much of this is determined by how much previous corn resdiue is laying on the soil surface, and the amount of natural plant health of the hybrid. Clean tilled corn on corn should have less disease pressure than a turbo tilled (minimum-till) corn on corn. If your corn is on soybean rotated ground, donôt let that lull you into a sence of security that you shouldnôt experience much disease pressure. I have seen in the past that continous no-till/strip till fields that are in 50/50 rotation with soybeans show just as much disease pressure as many corn on corn fields.
- If you are not going to spray all of your fields, then I would prioritize your **best to better fields for fungicide application.** However, this may not necessarily mean what you have considered your best farms by soil type. Most people think of their best farms as their ñdarker soilsò. This year, the darker soils with poor drainage may be the poorest yielding farms. Farms with good natural drainage, pattern tiled, or rolling timber soils will most likely be the highest yielding this year.

Die down vs. Dry down. This is probably one of the biggest debates that I get into with growers that say fungicides increase the moisture content of the grain; and that it costs them extra money to dry the bushels down. In moderate to heavy disease pressure, the fungal diseases can force the plant to an earlier death, which in turn shortens the amount of time that the plant can put dry matter into the kernels (decreases yield). A short term ñbenefitò of this die down effect is that it will allow a quicker moisture loss of the grain down to roughly 25% moisture in corn. After this point, the stalk becomes completely dead and the natural moisture loss due to respiration (in live plants) stops. The only way the grain will continue to dry is through air flow within the field.

Healthy plants that were treated with a fungicide in a moderate to heavy disease pressure environment are able to reach full maturity (the plants were able to accumulate as much dry matter into the kernels as possible). The plants then dry down naturally, through respiration and air flow within the field. Although fungicide treated corn plants tend to stay about 1-2 points wetter above 25% moisture grain compared to untreated fugicide corn plants, this moisture spread usually disappers as the grain gets drier because the respiration process of the healthy, live stalks continues to pull moisture out of the plant.

Standing corn, what is the value? If you have harvested many acres of flat, rotten, down corn; you begin to greatly appreciate the harveting ease of standing, healthy corn. (And not to mention that you dog also appreciates standing corn because he probably has a sore hiney after you have had a long day of raking corn into the corn head). Many farmers have told me that in some years that they ñfeelò that the fungicide application might not have increased corn yields enough to pay for itself, but the added side benefit of healthier stalks and less harvesting stress more than makes up for the fungicide cost.

Thatçs my 2 cents worthÜ ..the choice and decision is always yours.

Lonne