This newsletter and the advice herein are free. You usually get what you pay for.

More on corn fungicides
One approach is to corn leaf disease control is to arbitrarily start bombing corn fields with a fungicide.

Another, probably more efficient and economical approach would be to prioritize scouting and any control efforts on several factors. While not nearly as exciting as matching wits with insect pests, this is how I would go about making a decision if I thought I might need a fungicide:

1) Leaf diseases of the most concern are gray leaf spot and northern corn leaf blight.

2) All spots on a corn leaf are not a fungal disease. Correctly identify diseases. Use a good identification reference to help identify key diseases. This web reference by Dean Malvick, U of M Extension pathologist, is just one example: [http://www.extension.umn.edu/agriculture/crop-diseases/corn/](http://www.extension.umn.edu/agriculture/crop-diseases/corn/). If you are unsure, you can submit samples to the U of M Plant Disease Clinic. Sample submission guidelines are available at [https://pdc.umn.edu/](https://pdc.umn.edu/).

3) The residue in continuous corn will have more early season disease inoculum than 1st year corn. Reduced tillage fields can have higher disease pressure. Some other diseases that move into the state on winds, southern rust for example, would not follow this pattern.

5) Some hybrids are more susceptible to these diseases, focus on those.

6) Weather will influence disease pressure and rainfall and heavy dews will favor disease, a drought will not. Low lying areas and protected areas will have higher humidity and dews and often show symptoms first.

7) Focus any treatment on high risk fields with disease.

I believe the research data supports this approach. I suppose, that if someone wanted to expend the effort, this same approach could be adapted to foliar diseases of other crops as well.
**True armyworm**
After the yesterdays newsletter was emailed, I heard about some treatment of armyworms on wheat in SW MN. Additionally, some consultant friends let me know that they have been treating some wheat for armyworm across the border in eastern South Dakota. One mentioned that areas with hail have had problems.

Why hailed areas? Like black cutworm, true armyworm move north with weather systems from the south and drop out with thunderstorms. Additionally, the lodged, tangled stems of hailed on wheat or other grasses provides a good environment for eggs and larvae.

Unlike black cutworm, it is difficult to predict where problems from armyworm flights will occur geographically. Minnesota is a big place but I would focus on lodged small grains and not-Bt corn with grass weed pressure first.

**European Corn borer**

Feeding damage in corn whorl caused by 1st instar European corn borer larvae. Notice the scattered nature of the small shot holes. This damage is from a 2015 artificial infestation at the U of M SWROC, not a commercial field.

There is more non-Bt corn planted this year and some are scouting for corn borer eggs and larvae. There seems to be some confusion on what 1st generation corn borer damage looks like.
The small larvae are active in the whorl. The feeding pattern is distinctive. The larvae cause randomly scattered small, round holes or "shot holes" that become visible as leaves emerge from the whorl. Scattered holes in leaves near the base of the plant are not corn borer. Uniformly spaced holes, large, oblong holes or irregular shaped holes are not corn borer. I do not anticipate any widespread problems from corn borer in 2015.

SCN
Yellow soybeans are not the only symptom of SCN and yellowing is often temporary. Potassium deficiency-like symptoms, irregular uneven growth, slow closing of the rows can also indicate SCN damage and should be examined.

Happy trails,

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