K-STATE Research and Extension | Meadowlark District

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Fungicides on Soybeans

As early soybeans begin pod set and fungicide applications are made to our corn crop, the next decision on the minds of soybean growers might be whether that crop is next to need a fungicide. While some of the same principles that apply to corn certainly apply to soybeans as well, the decision in soybeans is often a little more complex.

Disease pressure *is* an issue in soybeans, and they *can* result in significant losses. Estimates from the Crop Protection Network put the average over the last five years at approximately $27/A. However, that's across all diseases (seedling diseases/nematodes/fungal disease/viruses/etc…). The fungal complex of foliar diseases portion of the total is much smaller, making in-season foliar fungicide applications a little more complicated. Thorough scouting is important to make sure what we're treating is actually a disease we can do something about.

Efficacy of foliar fungicides for disease control is evaluated annually in trial by University Plant Pathologists (see the 2024 results on the Crop Protection Network site: https://cropprotectionnetwork.org/publications/fungicide-efficacy-for-control-of-soybean-foliar-diseases). We know from these trials which fungicides work best for controlling which disease.

What is more variable is how a fungicide will perform if applied in the *absence* of disease. An 18 treatment (including a non-treated check) Iowa State study showed inconsistent results with no significant yield response. A nine-treatment study conducted by Kansas State University showed similar results: some products performed very positively, while others were more neutral. Strip trials in Missouri from 2018-2023 suggested a slightly less than two bushel per acre response. Bottom line: foliar fungicide applications *can* result in good yields – but results will likely be more inconsistent without disease present.

It's important to consider disease resistance as well. Other states have confirmed QoI fungicide-resistant strains of Frogeye Leaf Spot and Septoria Brown Spot and Kansas is now no different. A 2022 study of fungicide resistance from Kansas soybean fields showed almost 80 percent of the samples were resistant to the QoI fungicide class. Caution should therefore be exercised when using fungicides to make sure multiple modes of action are used and that products are used in such a way – and combined with other integrated disease management tools - as to preserve future efficacy.

For more information on fungicide products or to request a copy of the fungicide efficacy chart referenced above, feel free to drop me a line at dhallaue@ksu.edu or contact me at any Meadowlark Extension District Office.