



## Reduce Your Disease Risk with Hybrid/Cultivar Selection

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Now that nearly all fields in the state have been harvested it is time for us to start turning our attention to the 2021 season. Nobody knows what next year's growing season will bring. One thing we all want is to ensure that our crops yield as best as possible, with minimal additional worries. Some things, such as hail and windstorms are simply out of your hands. However, when diseases are concerned, the decisions you make now can significantly impact your risk level for common, yield limiting diseases. Corn hybrids and soybean cultivars differ in terms of their tolerance and resistance to different diseases, which in turn influences the likelihood that these common diseases can pose problems for you in the upcoming season.

Tolerance and resistance are different terms. Tolerance is the amount of disease a plant can take before yield/productivity starts to take a hit. You can think of tolerance as being similar to the amount of punches a boxer can take before going down. Boxers all will go down at sometime, but some simply can take more blows than others. Tolerance is often confused with resistance. Resistance is something that the plant contains at the genetic level that limits or prevents a disease from developing on the plant. Rarely do we see complete resistance, or immunity, in our crops, in fact some would argue that we never observe true immunity in crops. More often, we see a reduction in the ability of the pathogen to infect, grow, and produce symptoms in a particular plant, with resistance to some pathogens better than others. As you can imagine, less disease developing over time means less yield impact if the disease does occur. For this reason, knowing what you deal with most frequently can help you select the best materials for your situation.

When selecting your seed, consider the issues you have observed in particular fields or areas over the past several years and look at high yielding candidates that fit your program and contain good ratings against your most commonly occurring diseases. For example, if sudden death syndrome is not something you encounter, then focusing on cultivars with resistance to this disease would not be practical. However, selecting materials that are highly susceptible to grey leaf spot in an area where the disease occurs annually might put you at increased risk for future losses and a stressful growing season. Investing in a high yielding hybrid or cultivar with good tolerance and resistance to the common issues typically encountered in your region helps to protect your investment in that crop and provide insurance

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against potential disease issues. Industry and universities provide ratings or scores for resistance or tolerance to diseases that can help you select the best material for your situation. Not all companies and universities have data on all diseases, and some have more data than others, so make sure to do your homework and don't be afraid to ask your seedperson questions. Start off your 2021 on the right foot by reducing your disease risk with informed seed selection.