



Strategic Farming: Let's talk crops!

Talks about why producers should consider adding small grains to their rotation

Corn and soybean pathogens and pests take advantage of the short crop rotations in the southern half of Minnesota. Diversifying one's cropping system can lengthen the time that pests and pathogens are exposed to the elements between host crops and can reduce disease inoculum and pest pressure for the next time a host crop is grown. On February 16, 2022, Drs. Jochum Wiersma, University of Minnesota Extension small grains specialist, and Jared Goplen, UMN Extension educator, joined UMN Extension educator Ryan Miller for a wide-ranging discussion of this and other benefits related to adding small grains into one's rotation. This was the eighth episode of the 2022 Strategic Farming: Let's talk crops! webinars in this series.

According to Dr. Wiersma, the pathogen that causes *Fusarium* head blight (also known as scab) and related mycotoxin contamination in wheat also causes a stalk rot disease in corn. Because there is plenty of fungal inoculum for this disease in the system, it is a bad idea to plant wheat after corn. "It comes back to the disease triangle. We

need all three elements (the pathogen, a susceptible crop and the environment) for disease to occur. To make a crude analogy, each year farming is sort of like playing a game of Russian roulette and planting wheat after corn is sort of like having two bullets in your six shooter (pathogen and environment) rather than one (pathogen); planting wheat after corn is a recipe for failure."

Given the current geopolitical situation between Ukraine and Russia, two countries that produce wheat for export, new crop spring wheat futures making wheat a bit more competitive with corn and soybean, audience members asked at what yields or prices would spring wheat be competitive with the corn-soybean rotation. Dr. Goplen shares that while the benefits of rotating corn and soybean, as opposed to growing continuous corn, have been well established, it isn't as widely known that adding a third crop only increases this benefit. "Adding wheat into the rotation can increase yields of both soybean and corn by about 8%, and while your returns in the wheat year will be a bit lower than in your soybean

and corn year, over the length of the rotation, returns are similar to those in a corn-soybean rotation", says Goplen.

Wiersma and Goplen also discussed the benefits of having wheat in the rotation related to options for managing herbicide-resistant weeds and managing problematic corn rootworm populations.

With recent prices of oats looking so favorable, many that are considering oats as a crop to add to the rotation asked Wiersma what to think through before making a final decision. "First, see if you can find seed, because that is going to be a challenge and you might need to go further away than you might anticipate to find seed", says Wiersma, "Plant as early as possible. You need to have your planter ready to go by Easter, if not by St. Patty's Day, and be ready to go." He also shared that your local co-op might not be open by the time you need to plant oats and so folks may need to plant first and apply fertilizer afterward. Says Wiersma, "Oats are a competitive crop and so we need to get planted early to shade out germinating grass seed as we have no post-emer-

gence herbicide options for weed control. You also need to scout your crop and keep your eyes peeled for crown rust, and if you see it, be willing to treat it with fungicides". Goplen adds, "We just had a comment come in about knowing your market before you even get the seed. This is a really valid point because while oats have gotten a lot of attention lately, getting an oat bid right now can be a challenge".

Drs. Wiersma and Goplen answered many more audience questions about spring and winter wheat, hybrid rye and oats during the session. The rapport among the presenters, their years of experience with the topic at hand and the interaction with the audience made this Let's Talk Crops! session event for Minnesota crop producers. For those that missed this session, it is now available to view on YouTube at <https://youtu.be/O1vzFVj3Xu8>. For more information and to register to attend other weekly session through the end of March, visit z.umn.edu/strategic-farming.