

May 23, 2022

## COLORADO WHEAT DISEASE NEWSLETTER

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### DISEASE OBSERVATIONS

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We have gotten a few reports of mosaic virus symptoms, and samples from three different locations in Sedgwick county have tested positive for both *Wheat streak mosaic virus* (WSMV) and *Triticum mosaic virus* (TriMV) (**Figures 1 and 2**). This is a co-infection, so both viruses are present in the same leaf for all three samples. TriMV levels were relatively higher than WSMV, suggesting that the majority of the symptoms are likely caused by TriMV, and TriMV is always worse when WSMV is also present because WSMV ‘helps’ TriMV infect plants. This was also what we observed last year, and while there is resistance against WSMV, there unfortunately is no resistance against TriMV. However, it does seem that varieties that carry the wheat curl mite resistance, which vectors/spreads both WSMV and TriMV, are faring better against TriMV. Additionally, mite populations tend to be worse during drought years because the mites go to the plants to find water. This may partially explain why viruses are bad this year in addition to overall plant stress. My group will continue to monitor and test for viruses.



**Figure 1.** Mosaic virus symptoms in Sedgwick county (photo: Tyler Benninghoven).



**Figure 2.** Samples submitted from Sedgwick county that were positive for two mosaic viruses.

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## DISEASE WATCH AND MANAGEMENT

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### Stripe Rust

I still expect stripe rust pressure to be low in Colorado, but keep an eye out for disease and please let me know if you think you see stripe rust.

### Viruses

Watch for mosaic viruses, especially in stressed fields. Feel free to send me photos if you think your field is showing virus symptoms.

**Growers are strongly encouraged to regularly scout wheat fields for diseases.** Particularly, scout for stripe rust and viruses in the coming weeks.

The **Colorado Wheat Entomology Newsletter**, written by Dr. Punya Nachappa and Darren Cockrell, covers insect/mite pests and management tips. The newsletters are published bi-weekly during the growing season and are available here: <https://coloradowheat.org/category/news-events/wheat-pest-and-disease-update/>

Do you have a disease that you would like diagnosed? Contact the **Plant Diagnostic Clinic** for sample submission: <https://plantclinic.agsci.colostate.edu/> or plantlab@colostate.edu.

### **Additional resources**

1. Information about the 'green bridge' and risks for viral diseases due to volunteer wheat: [https://eupdate.agronomy.ksu.edu/article\\_new/spring-emerged-volunteer-wheat-should-producers-worry-about-wheat-streak-mosaic-virus-and-the-green-bridge-436-4](https://eupdate.agronomy.ksu.edu/article_new/spring-emerged-volunteer-wheat-should-producers-worry-about-wheat-streak-mosaic-virus-and-the-green-bridge-436-4)
2. The North Central Regional Committee on Management of Small Grain Diseases (NCERA-184) Fungicide Efficacy for Control of Wheat Diseases Table: <https://crop-protection-network.s3.amazonaws.com/publications/fungicide-efficacy-for-control-of-wheat-diseases-filename-2021-04-21-154024.pdf>
3. Wheat variety database with stripe rust resistance ratings from field trials: <https://wheat.agsci.colostate.edu/database/>
4. 'Making Better Decisions' 2021 Colorado Wheat Field Days publication: [https://webdoc.agsci.colostate.edu/csucrops/reports/winterwheat/wheatreport\\_2021\\_WFD.pdf](https://webdoc.agsci.colostate.edu/csucrops/reports/winterwheat/wheatreport_2021_WFD.pdf)

## CONTRIBUTORS

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