

Bacterial mosaic of wheat

Symptoms

Bacterial mosaic of wheat is characterized by sporadic widespread foliar mosaic (Fig. 1).



Fig. 1: Mosaic like symptoms spread over the entire leaf surface. Photo: Tom Isakeit

This mosaic effect is produced by uniformly distributed small yellow lesions, with ill-defined margins (Fig. 2).

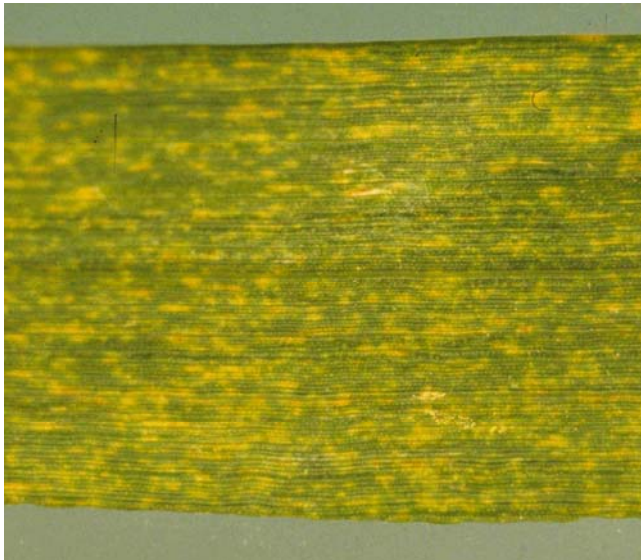


Fig. 2: Magnification of advanced foliar symptoms. Unlike other bacterial infections, neither oozing nor water-soaking is present. Photo: Tom Isakeit

Under favorable, moist conditions flag leaves can be compromised, with the consequent effect on yield.

Causal Agent

This disease is caused by the gram positive bacterium *Clavibacter michiganense* subsp. *tessellarius* (syn. *Corynebacterium michiganense*). The pathogen produces typical orange, mucoid colonies with entire margins on specific media. The pathogen also attacks triticale.

Inoculum Source and conditions

The primary inoculum is bacteria surviving in host residue, glumes and seed. Seed infection can be detected in the lab by seeding kernels on specific media. The pathogen is favored by moist conditions.

Control

- Use of pathogen free seed is recommended.
- Cultivar associated responses have been detected. There are no resistant cultivars available yet.

References

- Compendium of Wheat Diseases. 2nd Ed. 1987. M. V. Wiese. APS Press. The American Phytopathological Society.
- Chang, R. J., Ries, S. M., Hewings, A. D., D'Arcy, C. J. 1991. Bacterial mosaic of wheat in Illinois. Plant Disease, Cab Abstracts.

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