

Bacterial Leaf Streak Testing

WHAT IS BACTERIAL LEAF STREAK?

Bacterial leaf streak is a plant disease infecting cereal crops and resulting in grain yield reduction.

We are ready to test:

TISSUE: All CerealsSEED: All Cereals

Xanthomonas translucens pv. translucens is a causal pathovar capable of infecting barley solely.

Xanthomonas translucens pv. undulosa is the causal pathovar capable of infecting wheat, barley, rye and triticale.

Xanthomonas translucens pv. cerealis is the causal pathovar capable of infecting wheat, barley, rye and oat.

The first visual signs of the disease are on the leaves (leaf streak) and spikes (black chaff), with initial water-soaked streaks that develop to become translucent necrotic lesions. The presence of bacterial ooze should be a key diagnostic feature. Moderate to heavy infections can lead to withering and death of leaf tissue, which interrupts plant photosynthesis and yield set. Bacterial leaf streak may have multiple infection cycles during the growing season and is spread through rain, wind or field activities. The disease source is through seed, crop residue or perennial weeds, and thrives in growing seasons with warm days, cool nights and high moisture.

HOW TO SUBMIT SAMPLES?

- TISSUE: Submit 10 leaves which have suspected leaf damage. Package in a paper bag. If unavailable, wrap the suspected leaf tissue in paper towel, then package in a plastic bag.
- SEED: Send 100 grams. If you are adding germination, cool stress & fungal disease testing, send 250 grams.
- Complete the Sample Submission form.
- · Samples should be couriered.
- Rush available upon request.

HOW DOES SGS TEST FOR BACTERIAL LEAF STREAK?

- RT-PCR detection method using a probe-based procedure.
- Quality controls processed in tandem: Quantitative Positive Control (Detection), Negative Control (Not Detected), Extraction Blank, and No Template Control.
- Standard test results are expressed as:
 - 'Trace'
 - 'Detected'
 - 'Not Detected'
- · Quantitative test for seed available upon request

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