



Method for the Detection of *Acidovorax valerianellae* on Corn salad seed

Crop: Corn salad (*Valerianella locusta*)
Pathogen: *Acidovorax valerianellae*
Date: Version 1.0.1, July 2017

Sample and sub-sample size

The recommended minimum sample size is 10,000 seeds with a maximum sub-sample size of 5,000 seeds.

Principle

This is a grow-out test carried out in a sweatbox in two steps:

1. Growing the seedlings
2. Identifying and confirming the pathogen isolated from symptomatic cotyledons using a PCR test.

Restrictions on Use

- o This test method is suitable for untreated seed.
- o This test method is suitable for seed that has been treated using physical (hot water) or chemical (such as calcium or sodium hypochlorite) processes with the aim of disinfestation/disinfection.
- o This test method is suitable for seed that has been treated with protective chemicals or biological substances.
- o Damping-off on corn salad cotyledons caused by fungi can mask the *Acidovorax valerianellae* symptoms. If more than 20% of the corn salad seedling population is damped-off due to fungal infection and **no** *Acidovorax valerianellae* symptoms can be observed on the cotyledons, the test result must be considered invalid. In this case it is recommended repeating the test with sufficient seeds to compensate for seedling loss with the option of a Thiram-treated substrate. If, however, *Acidovorax valerianellae* symptoms are observed on the cotyledons and confirmed by the PCR, the test result is valid and the seed-subsample is infected.

Validation

Results of an ISHI-Veg comparative test were validated by ISTA following the process described in www.seedtest.org (>>Technical Committees >>Seed Health Committee >>Testing Methods >>Method Validation). The method was adopted as an ISTA Rule (7-030) in June 2014.

The method has been approved by the US National Seed Health System (NSHS) as a Standard A (see <http://seedhealth.org/seed-health-testing-methods/>).

Note: The section **Validation** has been updated. A new section **Method Execution** was added earlier.

Method Execution

To ensure process standardization and valid results, it is strongly recommended to follow the best practices developed by ISHI-Veg for *Molecular Techniques in Seed Health Tests* (see <http://www.worldseed.org/our-work/phytosanitary-matters/seed-health/ishi-veg/>).

Method description

See www.seedtest.org (>>Technical Committees >>Seed Health Committee >>Testing Methods)