

## Dry lenticel rot – an emerging postharvest disease on apples in northern Italy: insights from inoculation assays

Davide Spadaro, Università di Torino, Italy; [davide.spadaro@unito.it](mailto:davide.spadaro@unito.it)

Stefanie Maria Primisserp, Italy;

Sabine Oetttl, Italy.

*Ramularia mali*, an emerging postharvest pathogen affecting apples is causing concern due to the increasing cases since 2017. In contrast to the asymptomatic nature of the fungal infection in the field, symptoms of the disease appear on apples only after extended storage in cold storage facilities. The initial occurrence of *Ramularia* spots, also known as dry lenticel rot, was observed in 2012 within the northern Italian region of Piedmont and the province of South Tyrol. Recently, occurrence of the symptoms has been reported from other apple growing areas in Austria and France. The aim of this study investigates the pathogen's behaviour through inoculation assays, using three different methods (injection, puncture wounds, immersion) and subsequent storage for 3 months. Two fungal isolates, one isolate originating from symptomatic fruits of the cv. 'Golden Delicious', and one from the *Ramularia mali* type culture (CBS:129581) were used to inoculate apple batches at harvest time, as well as 5 and 7 months after harvest. Symptom development occurred in 100% of infections by injection of the conidial suspension. Wounding of the apple cuticle by puncturing with a sterile needle showed symptoms in 94% of the apples after 7 months of postharvest storage. However, no symptoms were observed in fruits at harvest time and after 5 months of storage. Immersion into conidial suspension showed no symptoms under all tested conditions. These findings contribute to a better understanding of the dry lenticel rot symptoms' development and pave the way for further investigations in the storage of apples.

*Ramularia mali*, *Malus domestica*, pathogen