

and considerable differentiation among isolates. Pathogenicity assays of each isolate were realized on wounded fruits of three commercial varieties, 'Salustiana' orange, 'Ortanique', and 'Nadorcott' mandarins. Findings demonstrate also high significant variations among the isolates in terms of lesion diameter produced on inoculated fruits. The disease severity on 'Ortanique' fruits was slightly higher than that observed on fruits of 'Nadorcott' and 'Salustiana' varieties. In fact, no correlation was found between cultural, pathogenic characters and hosts of the studied *Alternaria* isolates.

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REDUCE THE POST-HARVEST LOSSES IN ORGANIC BEETROOT PRODUCTION

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Text

The market for organic agriculture is rapidly growing. In Switzerland, the production of organic Beetroot is particularly renowned. However, their storage until spring has become increasingly difficult in recent years, and losses due to post-harvest rots can lead to over 50 % by March. The causes for the various storage rots in beetroot are currently unclear, and therefore there are few measures to prevent them in organic production. Pathogen infections causing storage rots in beetroot can occur via the seed, in the field, or post-harvest. Understanding the process of infection is, therefore, critical to find preventive solutions. Here, we present the results of a two-year project that aim to reduce post-harvest losses and elucidate the causes of storage rots in organic beetroot production. Analysis of stored beetroot revealed *Fusarium* and *Phoma* as predominant pathogens, while *Botrytis*, *Rhizoctonia*, and *Pythium* as additional causative agents of storage rots. Field trials in cooperation with four producers of organic beetroot were performed, where the production from sowing to storage was monitored. Different measures, such as steam sterilization of the seed, the use of biocontrol products in the field and before storage, or processing and cooling methods after harvest, as well as cultivar differences were investigated. The various measures were found to affect seed health, seedling emergence, leaf health, and the quality of beetroot after storage.

POST-HARVEST - Part 2: Sustainable managements of postharvest diseases: new technologies and approaches

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