

On the hunt for grapevine trunk diseases: A preliminary survey of vineyards in Ontario, Canada

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BACKGROUND

Until recently, grapevine trunk diseases (GTDs) were not considered a major issue in the cool climate growing region of Ontario, the largest grape production area in Canada. To determine the prevalence of GTDs and their causal agents, randomly selected vineyards of Chardonnay and Cabernet franc were surveyed in early and late summer during the 2024 growing season. The age of vines ranged from 2 to 30 years. From each selected vineyard, trunks were collected from vines with symptoms, including poor vigor, dieback, lack of spring growth, and/or characteristic Eutypa dieback symptoms when they were present. Fungal pathogens were first identified based on morphological characteristics and subsequently by multi-gene DNA analyses.

OBSERVATIONS

Symptoms of Eutypa were detected in only a few vineyards. No symptoms typical of Esca were observed. Species within the Botryosphaeriaceae family were the most prevalent, specifically *Diplodia seriata* and *Neofusicoccum* spp., followed in number by *Phaeoconiella chlamydozona*, *Phaeoacremonium minimum* and *Neopestalotiopsis rosae*.

Figure 1: Incidence of GTD Families (n=33 sites)

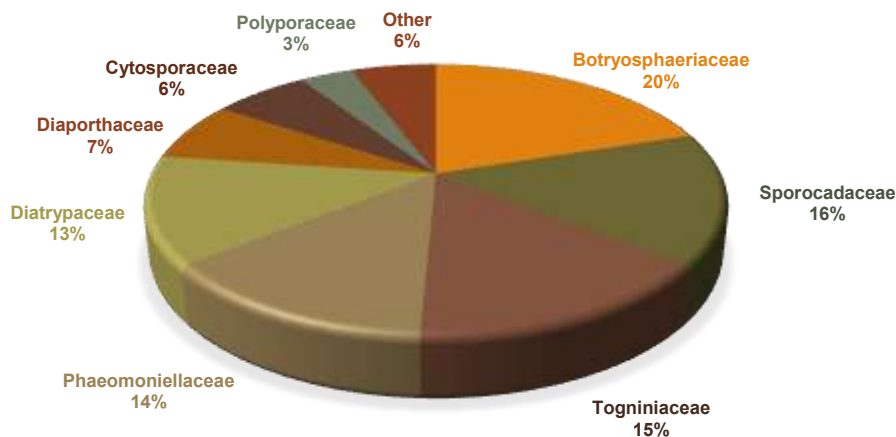
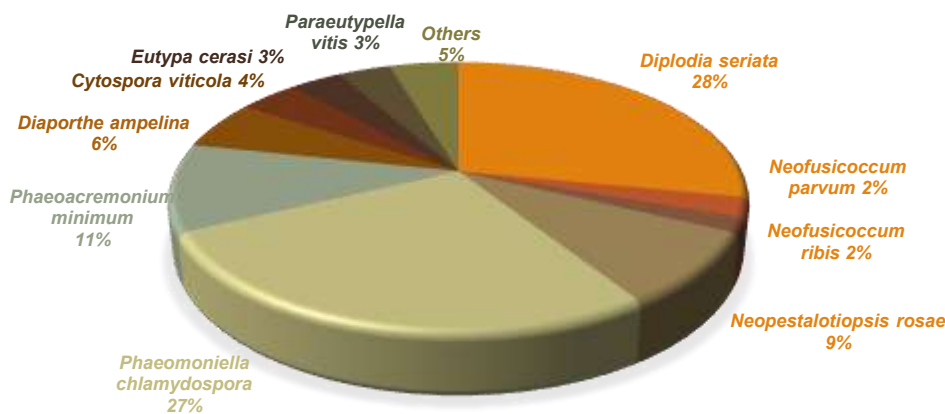


Figure 2: Incidence of GTD pathogens (n=142 samples)



CONCLUSIONS

This study represents the first attempt to demystify the status of GTD in Ontario, a grape-growing region with unique climatic conditions. Identifying the main GTD pathogens will provide a better understanding of GTD epidemiology and help to develop appropriate management strategies. The survey is being continued in 2025 to include additional vinifera blocks as well as French hybrids.

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