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Diseases diagnostic tool for ginseng growers

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Abstract

Diseases diagnostic tool for ginseng growers

Ginseng (*Panax quinquefolius* L.) is a valuable community crop in Ontario, but its long term viability is threatened by ginseng replant diseases that prevent successful cultivation of ginseng on the same land twice, even decades after the first crop. It is estimated that suitable land for ginseng production will be depleted in the next 20 to 30 years. This study will develop ideally a PCR-based diagnostic tool, for the ginseng grower to predict the diseases potential of soil intended for ginseng cultivation but with no known history of ginseng cultivation. This study uses metagenomic analysis approach that explains changes in community compositions over time in ginseng garden soil which causes Diseases. This study will facilitate understanding how the cultivation of ginseng in the field alters the soil microbiome. Consequently, this research will significantly help ginseng growers to better assess the risk of investing in a specific property before committing to its purchase.