

METABOLOMIC COMPARISON OF EUROPEAN ASH GENOTYPES WITH DIFFERENT TOLERANCE LEVELS AGAINST ASH DIEBACK

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Ash dieback, a tree disease caused by the ascomycete *Hymenoscyphus fraxineus*, is currently decimating ash populations in Europe and poses a threat to other ash species in North America. Despite its severity, between 1 percent and 3 percent of the European ash trees show moderate to high tolerance to the disease. This study compares the biochemical profile of 20 highly tolerant and 20 highly susceptible *Fraxinus excelsior* genotypes from 16 populations in 7 European countries using metabolomics. In terms of intraspecific diversity, phenotyping, and number of individuals, this is the most complete metabolomics study in ash that has been ever attempted. Results show a very different biochemical profile for both groups and focus on specific compounds that may play a major role in determining the tolerance or susceptibility of ash genotypes.

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