Our results suggest that chitin soil amendment promote plant growth indirectly by changing the rhizobiome, induce transcriptional and metabolomic changes in lettuce roots, and might activate induced resistance by priming lettuce plants.

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MULTICRITERIA ANALYSIS, A POWERFUL TOOL TO SELECT CONTROL METHODS AND DESIGN A CONTAINMENT STRATEGY AGAINST THE PLANE TREE CANKER DISEASE

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Text

In France, *Ceratocystis platani*, the fungus responsible of the plane tree (*Platanus acerifolia*) canker, is a quarantine pest that must be eradicated. In some regions, namely Provence-Alpes-Côte d'Azur and Occitanie, the disease is out of control in some areas. In 2020, Anses (French Agency for Food, Environmental and Occupational Health & Safety) was requested by the French Ministry in charge of Agriculture to identify different strategies to contain the disease by taking account of the specificity of the outbreak locations (urban or landscape environments, proximity with a river).

To address this question, a multicriteria analysis methodology has been used to design containment strategies relevant to these epidemic situations. The approach has been developed in 3 steps: i) the life cycle of a plane tree contaminated by C. platani has been divided in 4 sequences (standing plane tree, tree stump, contaminated residues after the removal of a plane tree and new planting of a plane tree), ii) 21 control methods against C. platani have been selected and considered as single actions that could be positioned on one of 4 sequences of the tree life cycle, and iii) 13 criteria were selected to evaluate the efficacy, cost, innocuity, scale of implementation (spatial and time) and social acceptability of each method.

Eleven ready-to-use methods (among the 21 control methods and the prophylaxy method) have been ranked by considering the specificity of the 3 outbreak environments.

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EVALUATING BIO-PRODUCTS, FUNGICIDES AND SAR CHEMICALS IN INTEGRATED MANAGEMENT OF ALTERNARIA BRANCH ROT OF CARNATION

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