Francesca Grisafi

KEY-WORDS:
HAZELNUT · TREE MODELLING · GROWTH

PROFILE

I am a second-year Ph.D. student in Pomology studying the growth and physiology of Corylus avellana. Thanks to the modelling approach of my Ph.D. project, I started to appreciate computer science!! (I never thought of it before my Ph.D.).

AFFILIATION

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LANGUAGES

Mother language

Level B2

HOW TO REACH ME

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PROJECT TITLE

Modelling growth of *Corylus avellana* to parametrize L-HAZELNUT model.

Steps of the research

- Bibliographic research to determine the crucial steps of my research
- Architecture analysis of one-year-old shoots (both grafted and ungrafted plants)
- Analysis of the correlation between leaves carbohydrate accumulation and photosynthesis
- Analysis of the respiration (both dark and maintenance) of the major organs of hazelnut (leaves, stems, fruits)
- Learning of coding into two different platforms (Lpy and Groimp) to make a first architectural simulation

Main Results

Evaluation of the crucial components of the model: carbon balance (photosynthesis and respiration) and architecture.

Research Contribution

When built, L-hazelnut could be an interesting tool for educational and research scopes: building a model implies deeply studying how the plant work. Moreover, tree experiments often involve plenty of time. The model could allow researchers to virtually simulate their assumptions and think more about them.

Why should you care?

Hazelnut is a poorly studied plant. But the economic interest around it is increasing.
What about learning how it works and builds a model of it to cultivate and research on hazelnut plants better?