Characterization of the impact of tillage and nitrogen fertilization on the root development of a winter wheat crop by use of NIR hyperspectral imaging combined to chemometrics.

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Objective

To characterize the impact of **tillage management** and **nitrogen fertilization** on the **root system development** of a winter wheat crop (*Triticum aestivum* L.)

How?

Use of an innovative root quantification method that combines **NIR hyperspectral imaging** and chemometric tools

Why?

- Impact of cultural practices on the root system development + crop N absorption
- Calibration and validation of the root growth module of STICS

Perspectives

Encouraging preliminary results – Applications in breeding, guidance to farmers and crop science research