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High temperatures applied during seed filling of pea (*Pisum sativum* L.) affect seed growth and nitrogen partitioning within plant

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HAL Authorization

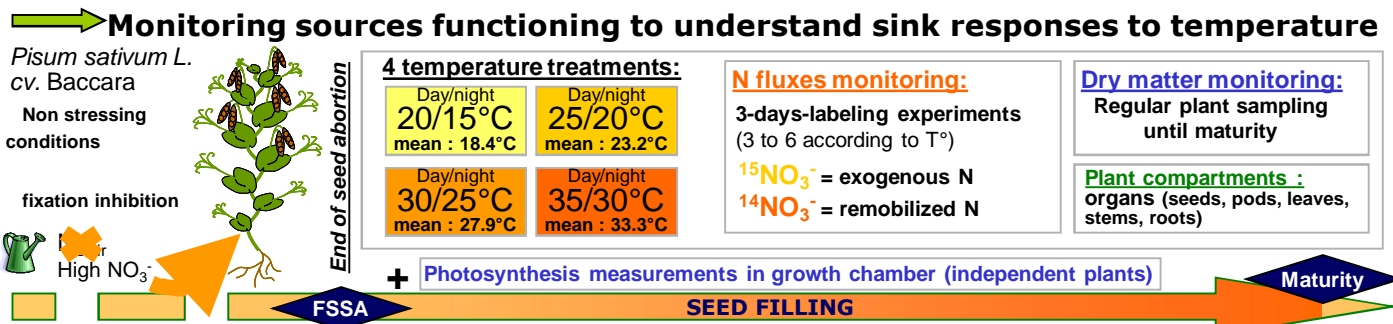
Analysis of temperature effect on elaboration of pea seed yield and quality

High temperatures applied during seed filling of pea (*Pisum sativum* L.) affect seed growth and nitrogen partitioning within plant.

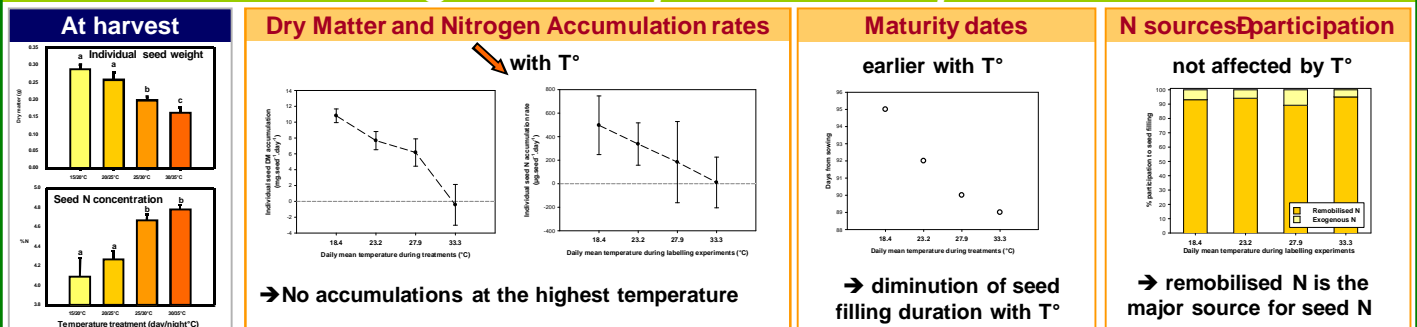
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How are seed weight and seed nitrogen concentration altered by rising temperatures ?
This could originate from a reduction in carbon availability and the modification of nitrogen repartition within plant.

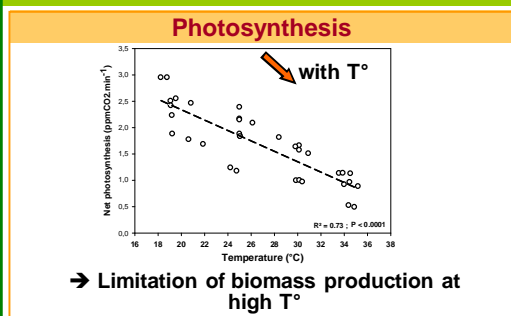
Objectives and methods



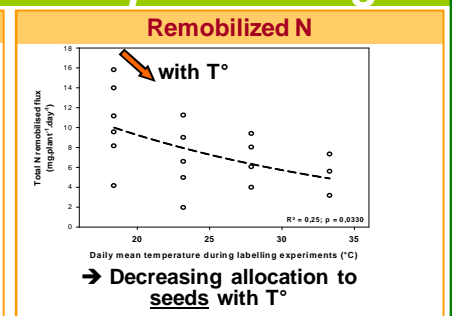
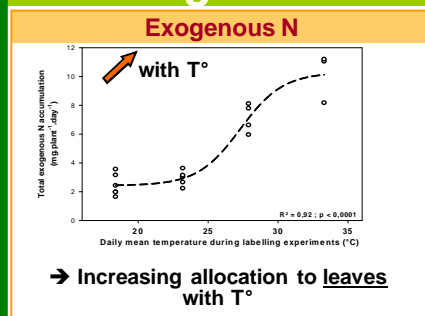
Seed growth response to temperature



Carbon sources



Nitrogen sources and partitioning



Conclusions and Perspectives

- Variation of seed growth parameters with temperature rise evolved the same way than main C and N sources variations with temperature → source alteration by temperature could explain seed growth response: a first step to understand temperature effect on seed filling process in pea
- relevant temperature range = clear variations with temperature of all variables → a modelling prospect can be seen to predict seed filling response to temperature