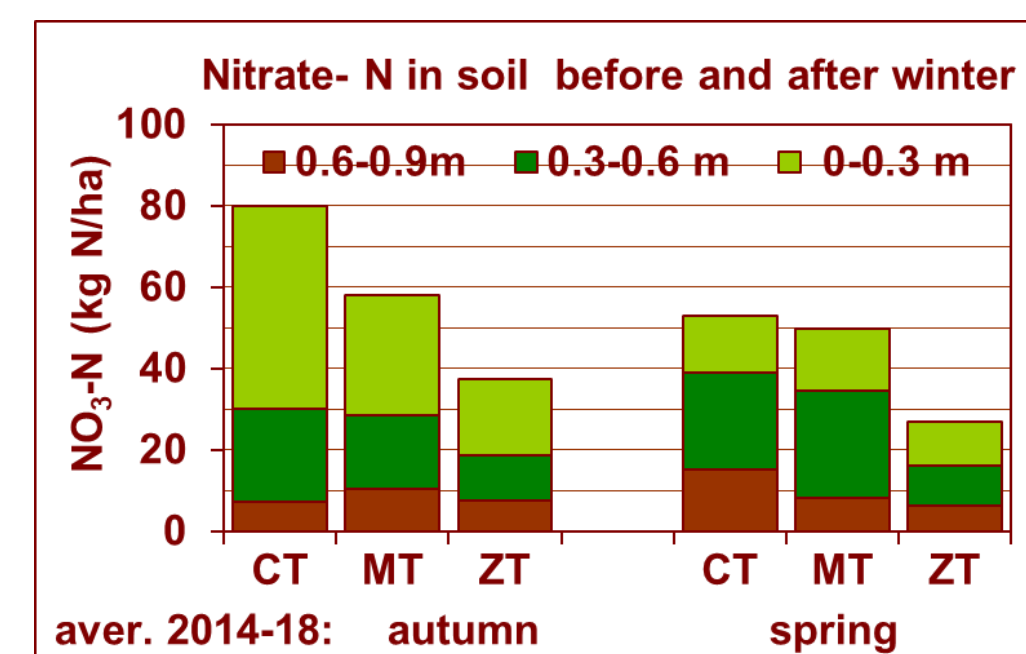




Field trial: Different soil tillage since 1995

General information

Climatic zone: continental
Climatic regions: warm-dry (T1) to warm-slightly dry (T2)
Altitude 360 m, beet production area
The average annual temperature (aver. 1981 to 2010): 9.0° C
The average annual precipitation (aver. 1981 to 2010): 513 mm
Orthic Luvisol (Silty clay loam)

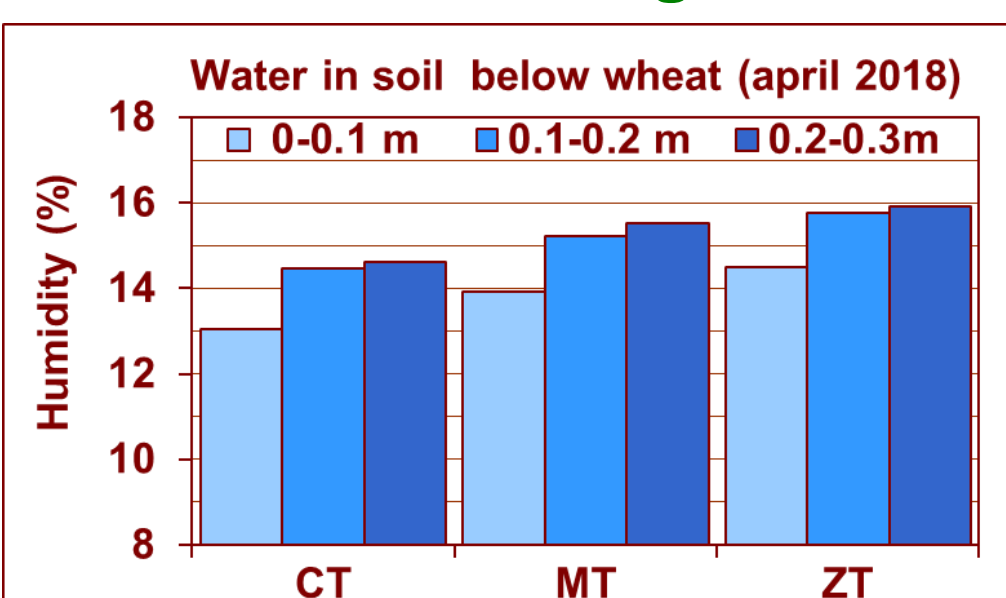


Cropping systems

Standard: Conventional tillage (Turning of stubble, moldboard plow up to 22 cm)

SICS: Minimum tillage (Turning of stubble up to 10 cm)

Zero tillage

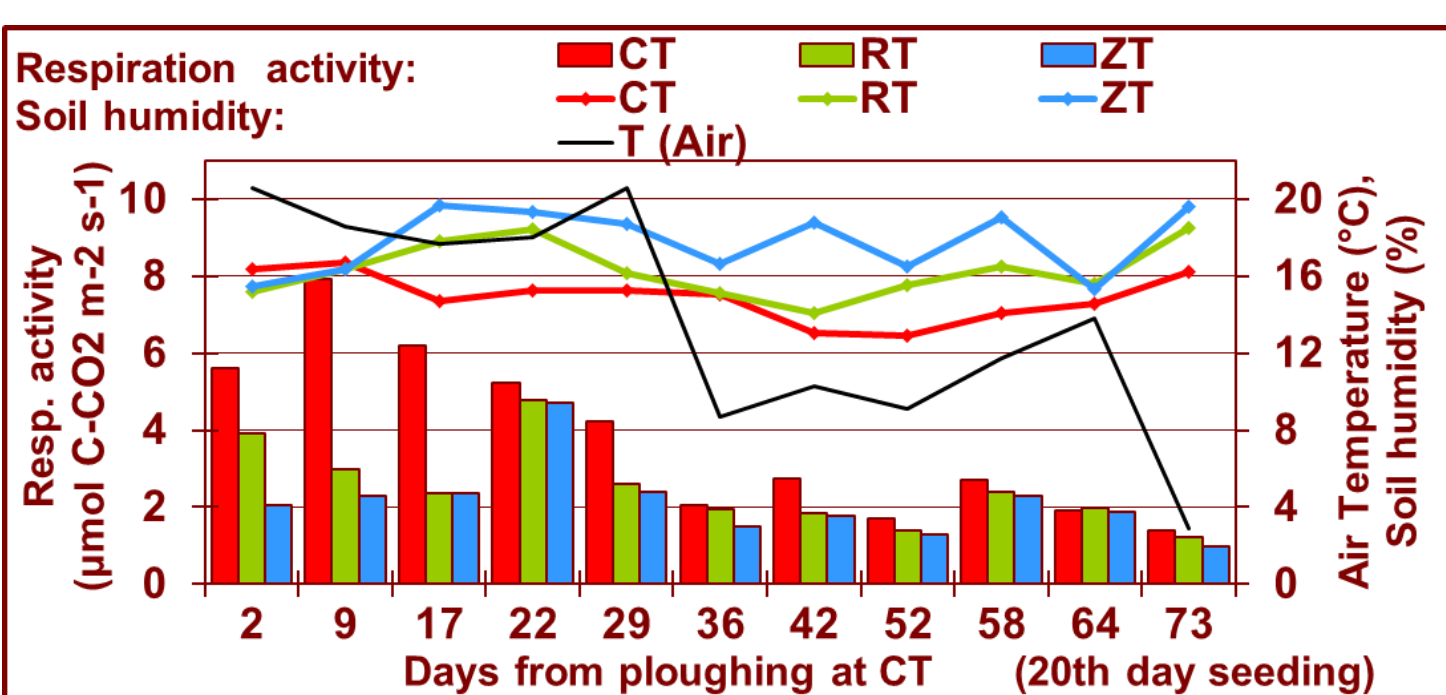


SICS: lower mineralization = lower nitrate content in soil before winter = lower risk of nitrate leaching and water pollution

ZT: Macropores formed by crop roots or macroedaphone

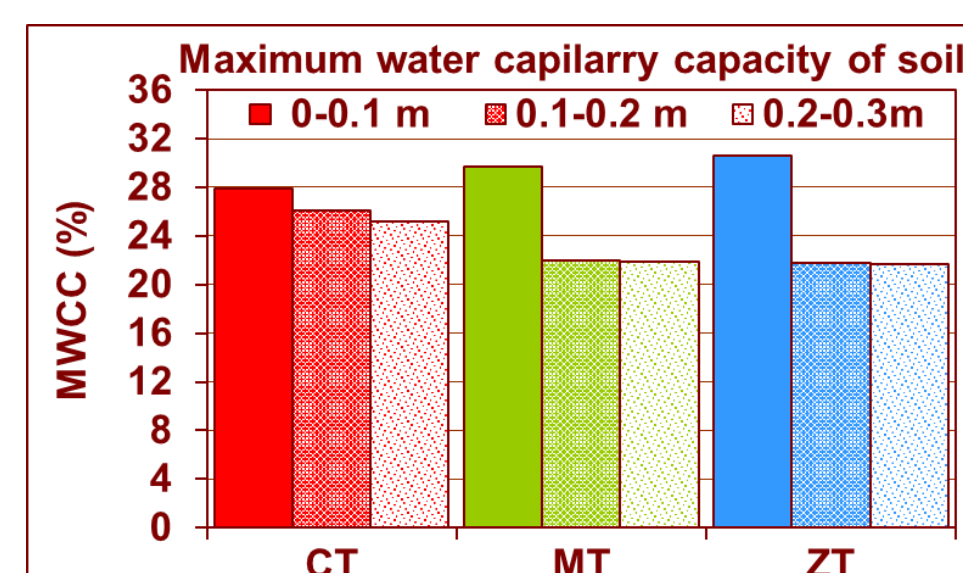
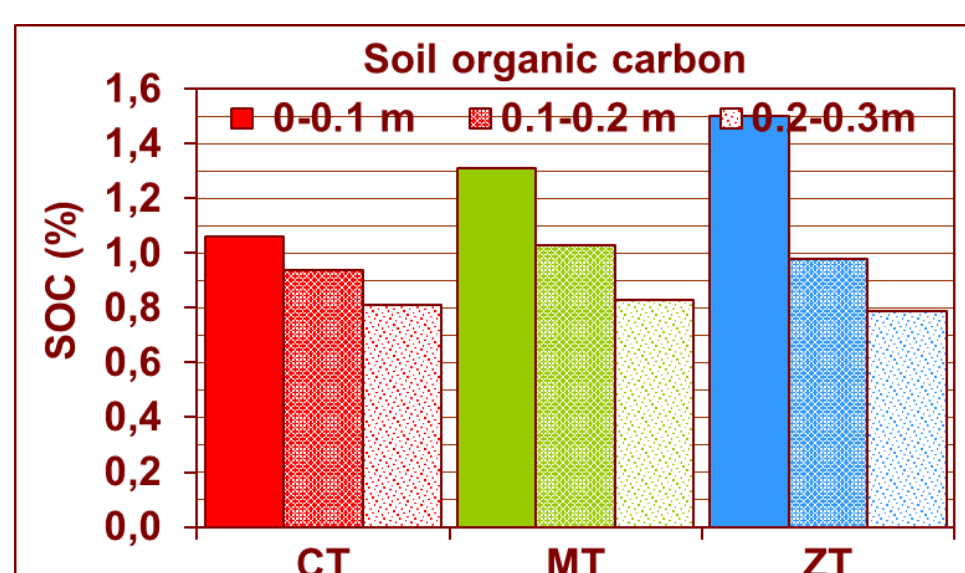


SICS: lower soil temperature (crop residues cover) = lower evaporation = higher water content in soil



SICS: lower tillage intensity = lower respiration activity = higher SOC

Higher SOM = higher portion of water stable aggregates, better water infiltration, decreasing risk of erosion



Dissemination and stakeholder meeting

- **Ruzyne's day of plant nutrition and agro-technics** (Feb 21, 2018 and Feb 20 2019, workshop, 115 and 104 part.) Focus: Current problems in winter crops growing this winter and the establishment of spring crops in various cropping systems.
- **Drought 2018 and the sustainability of land management systems at changing climate** (Nov 29, 2018, workshop in Prague, 108 part.) Focus: The evaluation of the drought in 2018 and its impact on the effectiveness of individual agro-technical measures.
- **Drought 2018: The innovation of cropping systems at changing climate** (Dec 6, 2018, workshop in Lukavec, 100 part.) Focus: New practices in growing technology to improve soil quality, reduce erosion and water pollution.
- **Field demonstration in Lukavec** (June 21, 2018, 49 part.): soil conservation tillage techniques, plant nutrition and protection limiting the environmental impacts.
- **Field demonstrations in Česká Bělá and Janovice** (June-Aug, 4 events): organic matter in soil, water infiltration, soil conservation tillage techniques for better rainwater infiltration and water erosion limitation (esp. at potatoes growing).
- **Stakeholder meeting in Jaroměřice nad Rokytnou** (Feb 27, 2019, 27 part.) – Focus: SICS used in different regions – e.g. new technology for agronomical practices (e.g. reduce soil erosion).



Stakeholders - general demurrer :

!!! Large administrative stress !!!
!!! and bureaucracy for farmers !!!



The **SOILCARE** project is a 5 year project aimed at identifying and evaluating promising soil improving cropping systems and agronomic techniques increasing profitability and sustainability across scales in Europe.

The SOILCARE project consortium consist of 28 partner institutes from 10 European countries. The SOILCARE project is coordinated by ALTERRA, Wageningen UR, The Netherlands.

• Starting date: March 1st 2016. • Ending date: February 28th 2020. • EU contract number: 677407

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