# Alfalfa to get back into planetary boundaries

2025 world alfalfa congress
FRANCE REIMS - CHÂLONS

## Sequence 2: Physiology and Genetics

Dejan Sokolović

*Young researcher session*

FROM 03 > TO 06 nov. 2025

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# Pre-sowing inoculation of rhizobia and arbuscular mycorrhizal fungi as a way to increase alfalfa (*Medicago sativa* L.) varieties productivity on acid soil


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ИНСТИТУТ ЗА КРМНО БИЉЕ КРУШЕВАЦ

FROM 03 › TO 06 nov. 2025

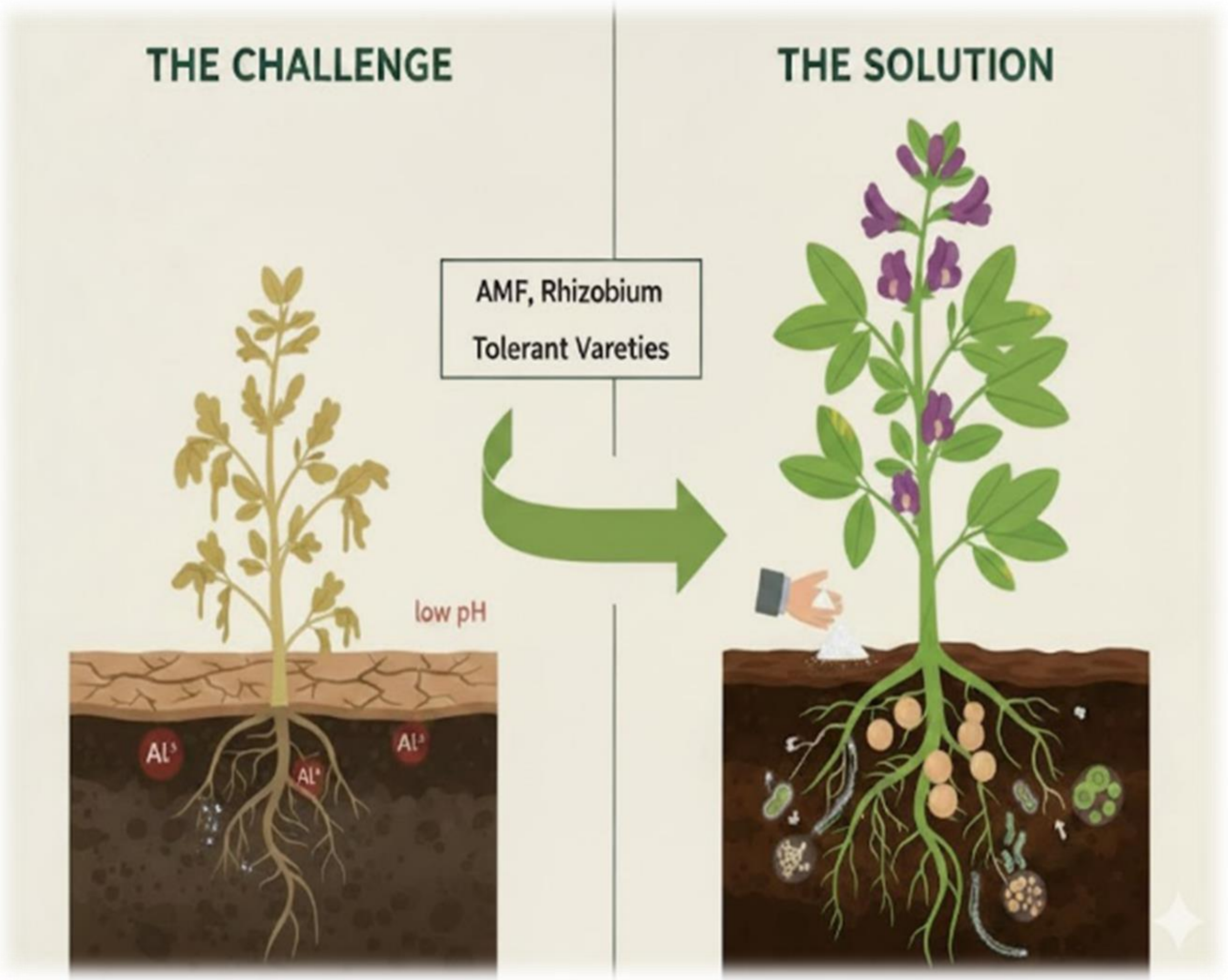
# Significance of the study

🌱 Alfalfa (*Medicago sativa* L.) is the most important perennial forage legume in Serbia and worldwide

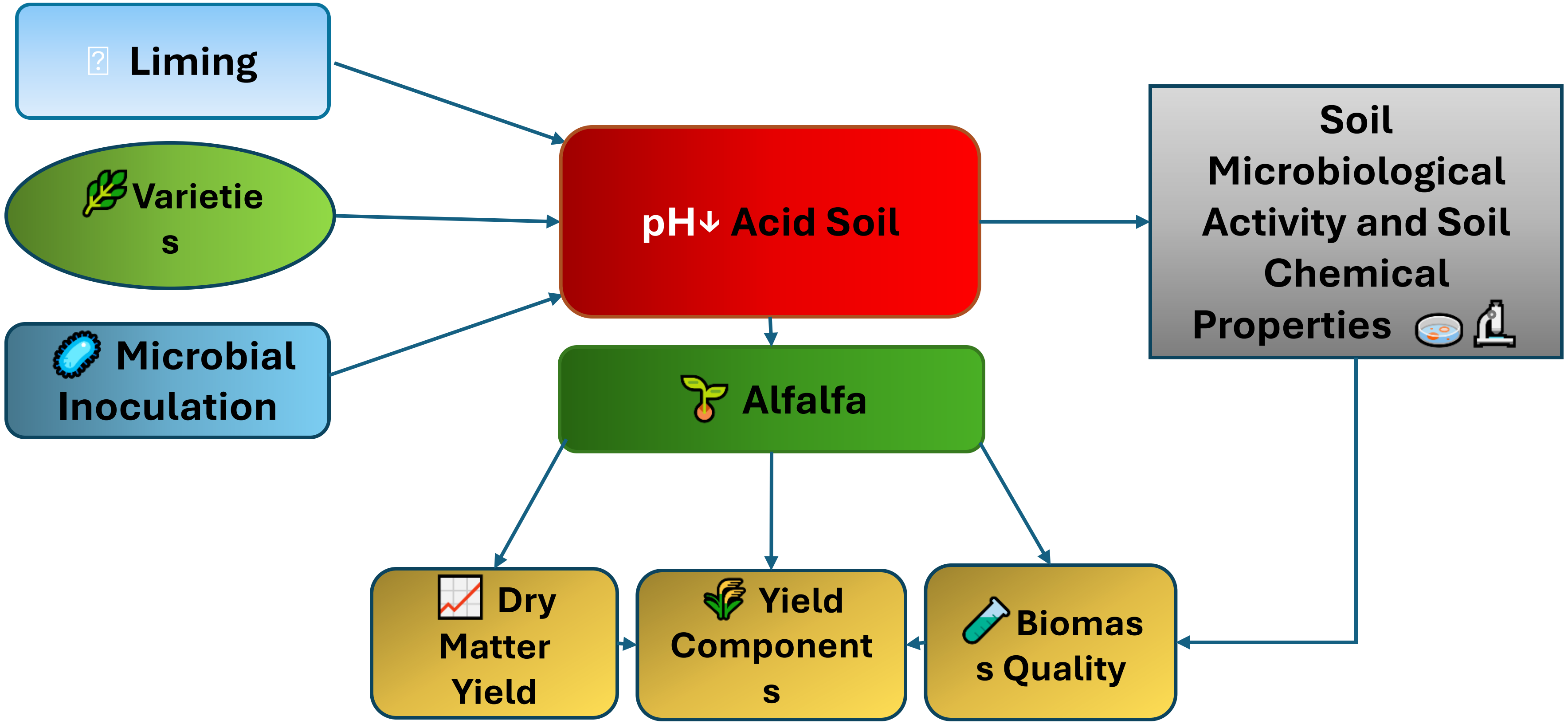
⬇️ Acidic soils remain a major challenge for successful cultivation

🧪 Liming, rhizobium inoculation, arbuscular mycorrhizal fungi (AMF) and tolerant varieties are promising solutions

🔬 Interaction between AMF, rhizobia, soil acidity, and varieties is still poorly understood

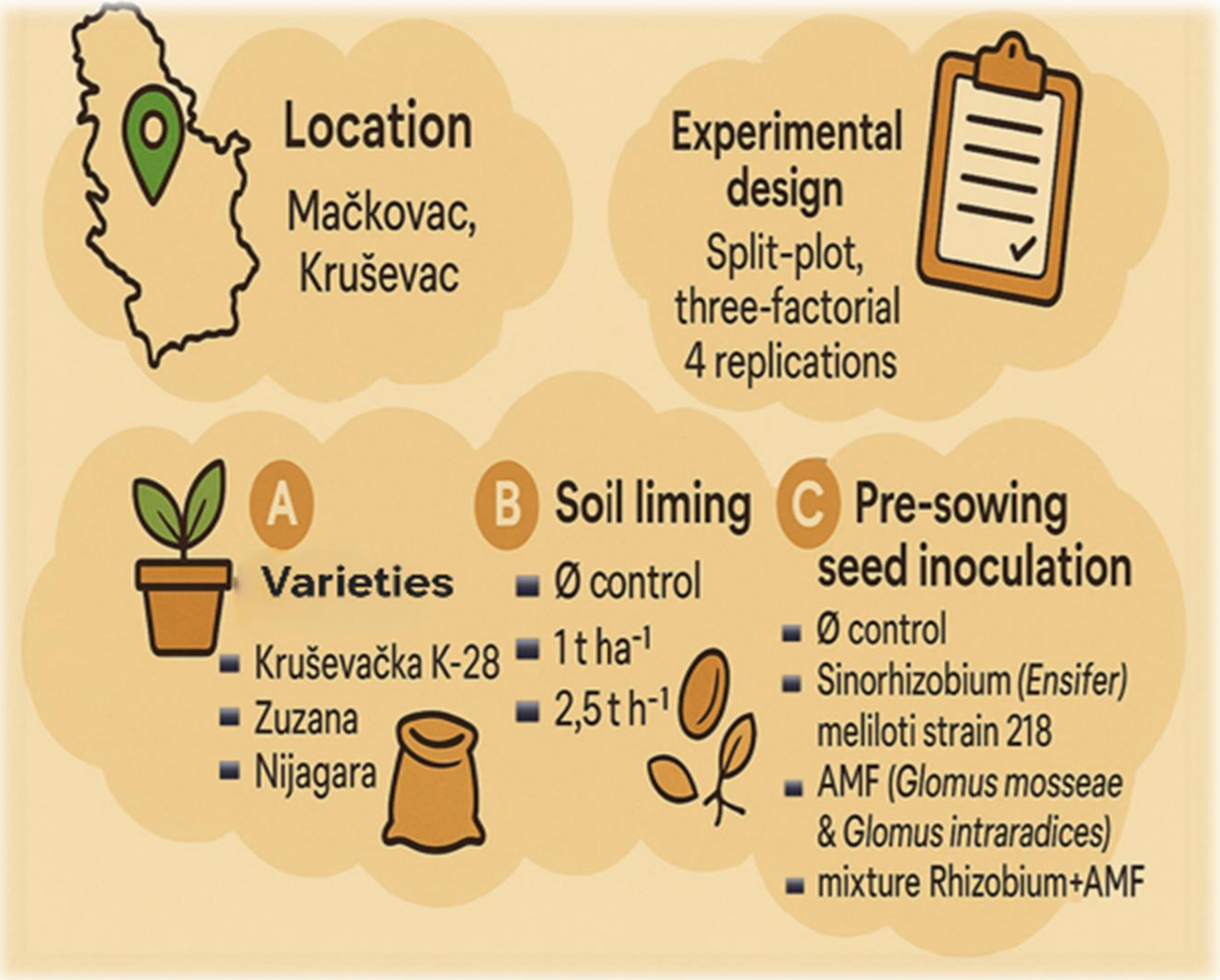


# OBJECTIVES

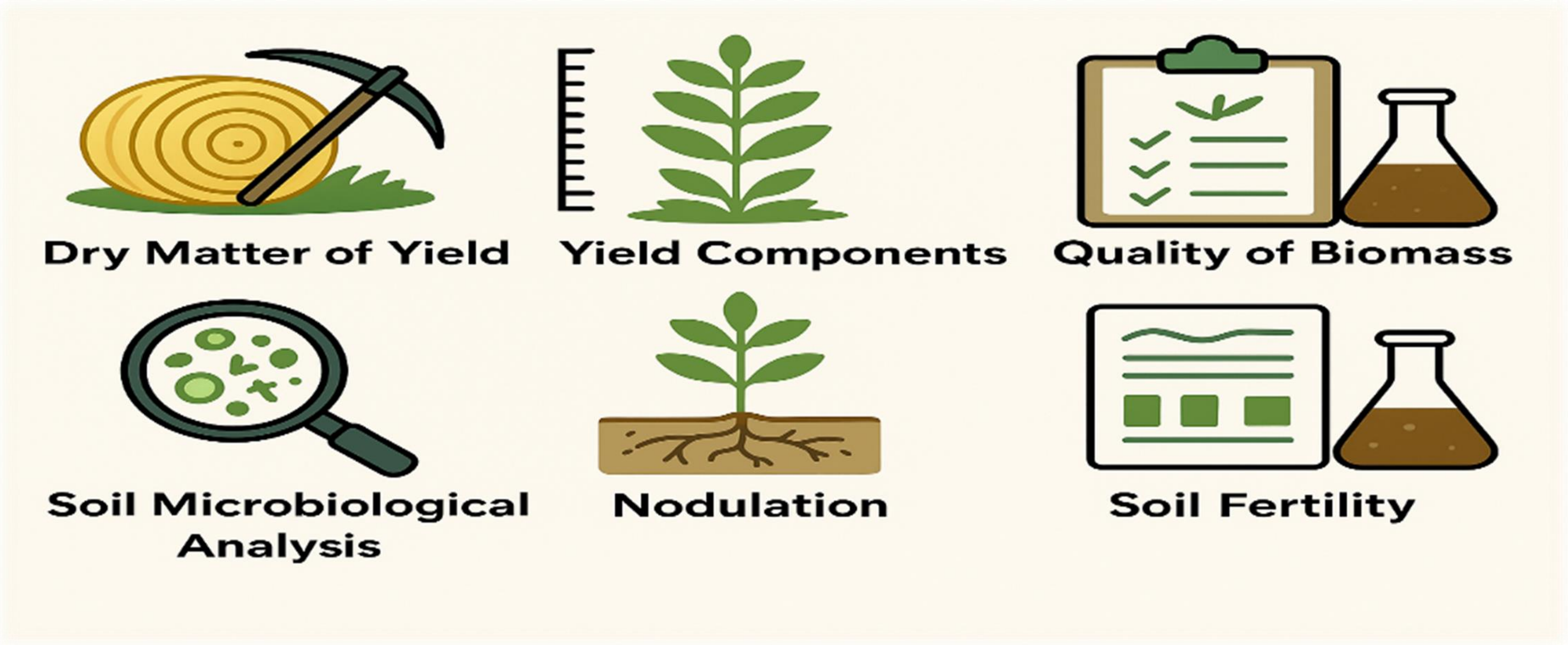


Liming
Varieties
Microbial Inoculation
pH↓ Acid Soil
Soil Microbiological Activity and Soil Chemical Properties
Alfalfa
Dry Matter Yield
Yield Components
Biomass Quality

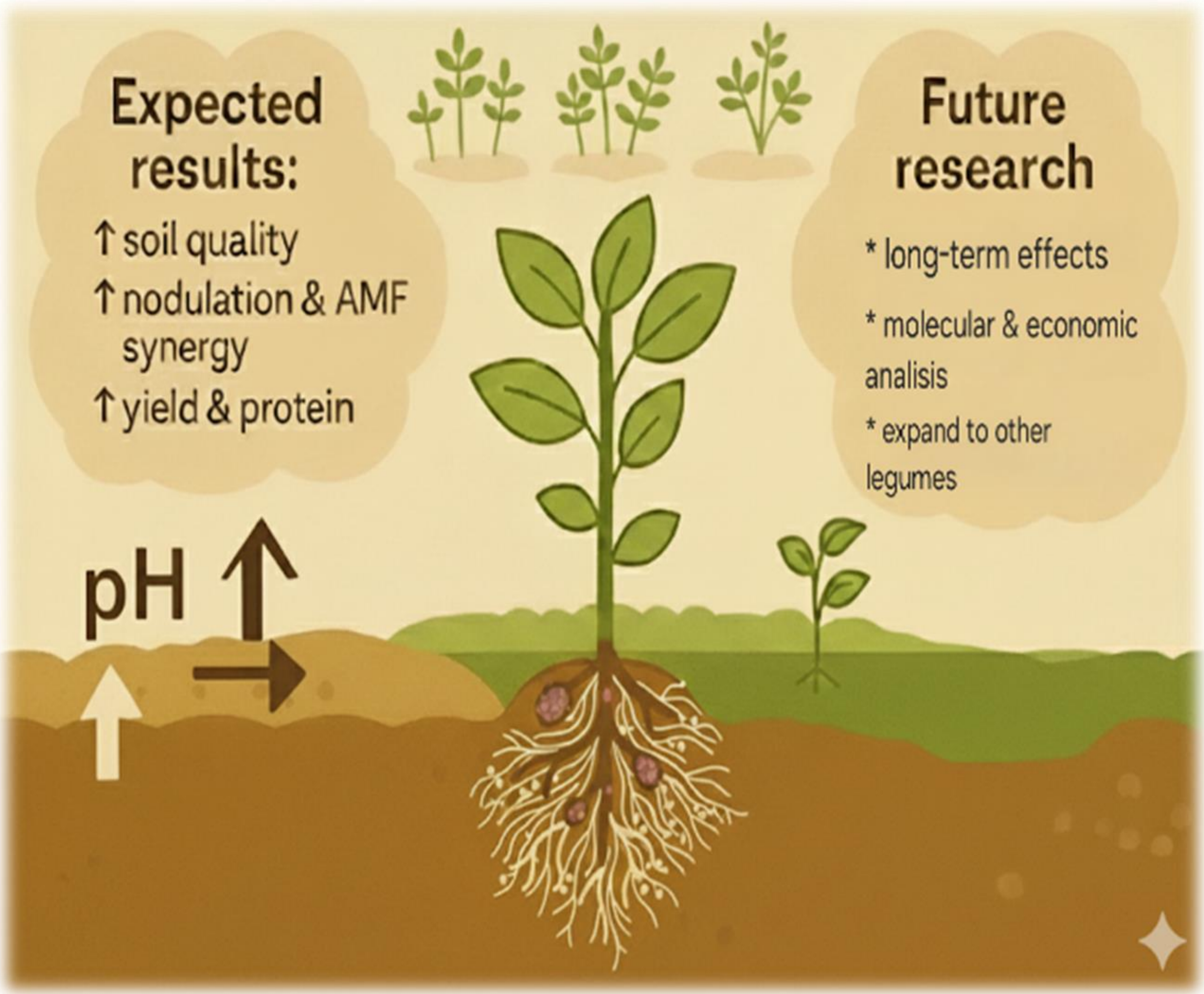
# Materials and metods




# PARAMETARS TO BE MONITORED



# CONCLUSION



Expected results:
↑ soil quality
↑ nodulation & AMF synergy
↑ yield & protein
pH
Future research
* long-term effects
* molecular & economic analisis
* expand to other legumes


# Thank you for attention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