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Co-creating agroecological solutions through regenerative practices: the SIC.A.RI.B. project in the heart of the Mediterranean

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SIC.A.RI.B. context and challenge

Sicilian EIP-AGRI Operational Group devoted to agroecological and regenerative practices in organic farming

Despite Sicily is the leading region in organic farming area, agroecological practices are not spread and adopted enough

Resistance to change in crops and practices

Dramatically escalating climate crisis: droughts, floods, aleatic weather patterns

Non-functional market channels for alternative crops

SIC.A.RI.B. goals and innovation questions

SIC.A.RI.B. seaks to innovate practices and build momentum for agreocological approaches in organic farming

Technically:
Arable: cereals-legumes intercropping (wheat-chickpea)
Permanent: catch/cover crops in orchards (almonds)

Socio-technically:
Soil and flora (self)-monitoring and co-evaluation

Socially:
Interactive innovation involving farmers, researchers and advisors
Policy implications

SIC.A.RI.B. approach and methods

Exploration of new practices in arable fields and orchards, compared to business as usual

Soil and flora analysis leading to greater understading of impacts and performance assessments criteria

Adoption of living lab dynamics for socio-relational interactions

Co-determination of the innovative practices scalability potential

Investment on dissemination and sharing

SIC.A.RI.B. relevant outcomes

Obtained results influenced by the weather trend.

Productions met expectations, showing greater resilience and productivity of the intercrop compared to the pure stand, especially re. the leguminous crop, with greater total production per hectare.

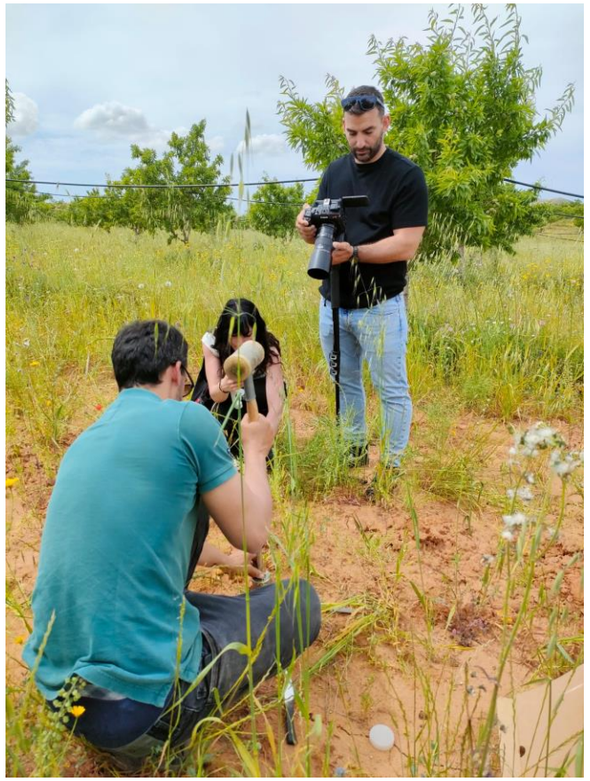
The floristic sampling shows a greatest occurrence of spontaneous plants associated with pure chickpeas and lowest with pure wheat.

Density of chickpeas higher in the mix than in purity: the greater competitiveness of wheat provides a competitive advantage to chickpeas from the early stages of development, with a support effect between the two species grown in intercropping.

SIC.A.RI.B. relevant outcomes

In **arable farm**, soil organic carbon and total nitrogen concentration remained stable and unaffected by weather conditions during the wheat-chickpea intercropping experiment.

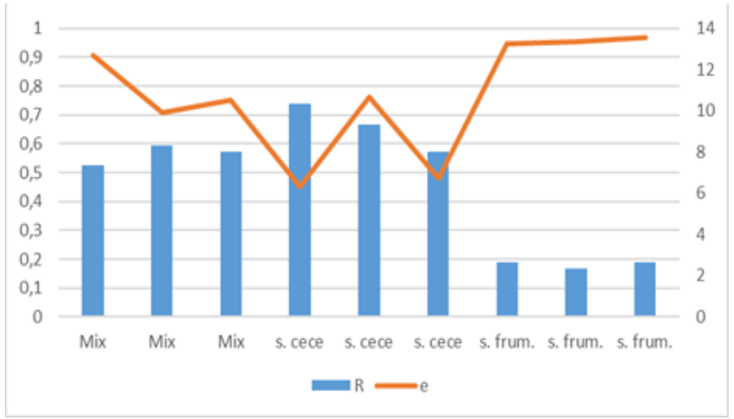
In **tree-crop farm**, similarly to what observed in arable farm, weather conditions impacted enzyme activity, showing an increase in spring/summer compared to autumn/winter.

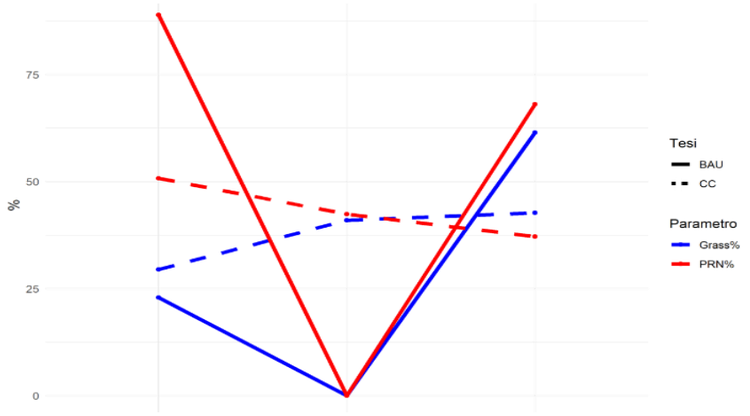


SIC.A.RI.B. relevant outcomes

Spontaneous flora richness and functionality responded differently depending on the studied systems (e.g. higher richness in chickpea-wheat intercropping than in pure wheat system; higher diversity in tree system with cover crops)

Flora dynamics followed the climatic fluctuations in the two years, with a very dry 2024 and a more humid 2025





SIC.A.RI.B. relevant outcomes

Soil and flora (self-)monitoring by practitioners leads to greater familiarity with practices and conciliation with approaches

Eagerness among the outreached farming and advisory communities to explore the potential of regenerative practices

Compliance with Regional AE policy expectations, but harder compatibility with some CAP provisions (e.g. EcoSchemes)

Food for thoughts

Resistance to change can be mitigated through socio-relational and cognitive investments

Regenerative practices cannot be intended as silver bullets vis-à-vis extreme climatic events

Dissemination should address practitioners as well as citizens and policy makers with appropriate and targeted means

Thank you

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