

# European Conference: Biodiversity in Food Supply Chains

## Monitoring of Biodiversity Indicators in Citrus Cultivation The BioDiversity Grow Programme

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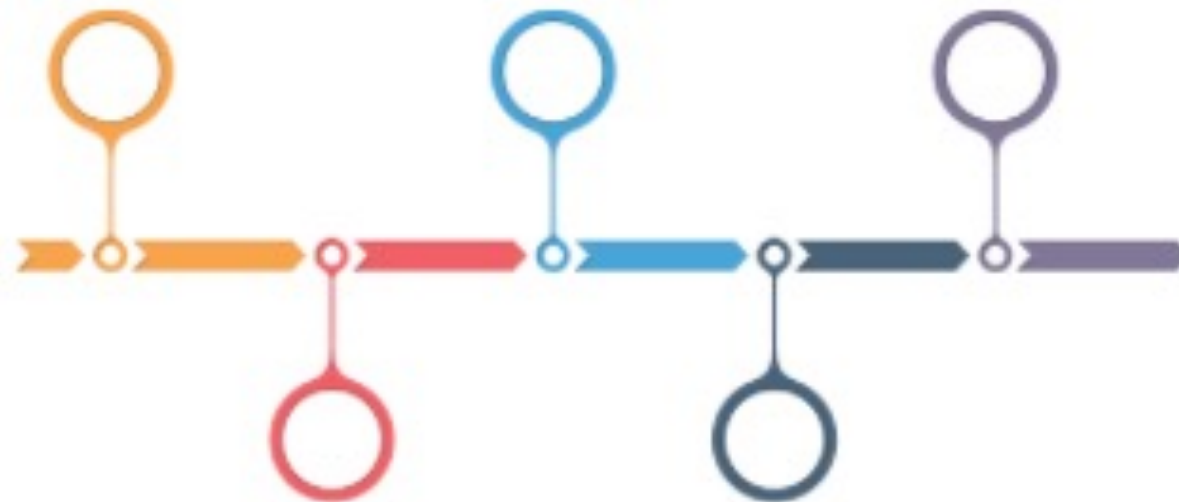
based on a decision of  
the German Bundestag

# BIODIVERSITY GROW IS A STANDARD FOR THE PRODUCTION, PACKAGING, INDUSTRY AND SUSTAINABLE TRADE OF FRUIT AND VEGETABLES

2019. **BioDiversity Grow** is created by Quality & Adviser, SL; together with The Polytechnic University of Valencia

2021. BioDiversity Grow it can be certified by SGS

2021. BioDiversity Grow joins Food For Biodiversity



2022. More than 3000 hectares of fruits and vegetables implement the program

2024. BioDiversity Grow joins the ESS Global G.A.P. Working Group



# How do we do it and what do we contribute in BioDiversity Increase?

	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
initial visit											
follow-up visits											
flora evaluation visits											
soil samples											
aerial samples											
laboratory work											
technical visits											
reports											



Field: BioDiversity: Periodic Visits/Field Monitoring  
 Sampling – Evaluation of irrigation and fertilizer use



Laboratory: Biodiversity Analysis  
 Analysis of indicators and proposals for improvement



BioDiversity Grow Reports  
 Technical training support



Progress assessment and qualification  
 Development of strategies Impact Assessment of Phytosanitary Treatments (EIQ) and to select the cover fields that can be home of key species



# ***DETAIL OF THE WORK IN EACH FARM***

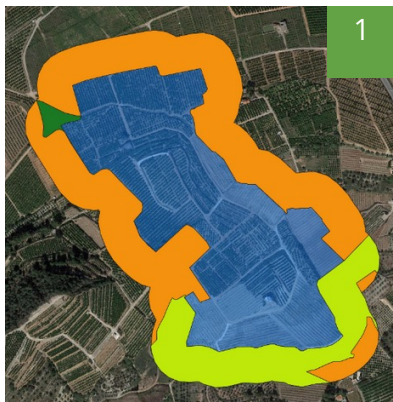
## ***BIODIVERSITY ASSESSMENT: ECOLOGICAL INFRASTRUCTURES***

Ecological INFRASTRUCTURES (EI) provide different ecosystem services to the environment.

1-External ecological infrastructures

2-Permanent internal ecological infrastructures (hedges)

3 & 4- Non-permanent internal ecological infrastructures: spontaneous vegetation covers and planted vegetation covers.



# BIODIVERSITY EVALUATION: BIOINDICATORS

The FUNCTIONAL BIODIVERSITY of AUXILIARY FAUNA

BIOINDICATORS (arthropods whose presence and abundance indicate the quality of the agricultural ecosystem)

## 5. Aerial entomofauna



## 6. Aerial acarofauna

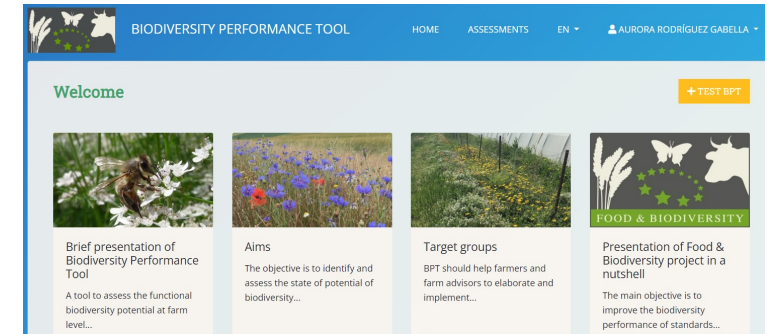
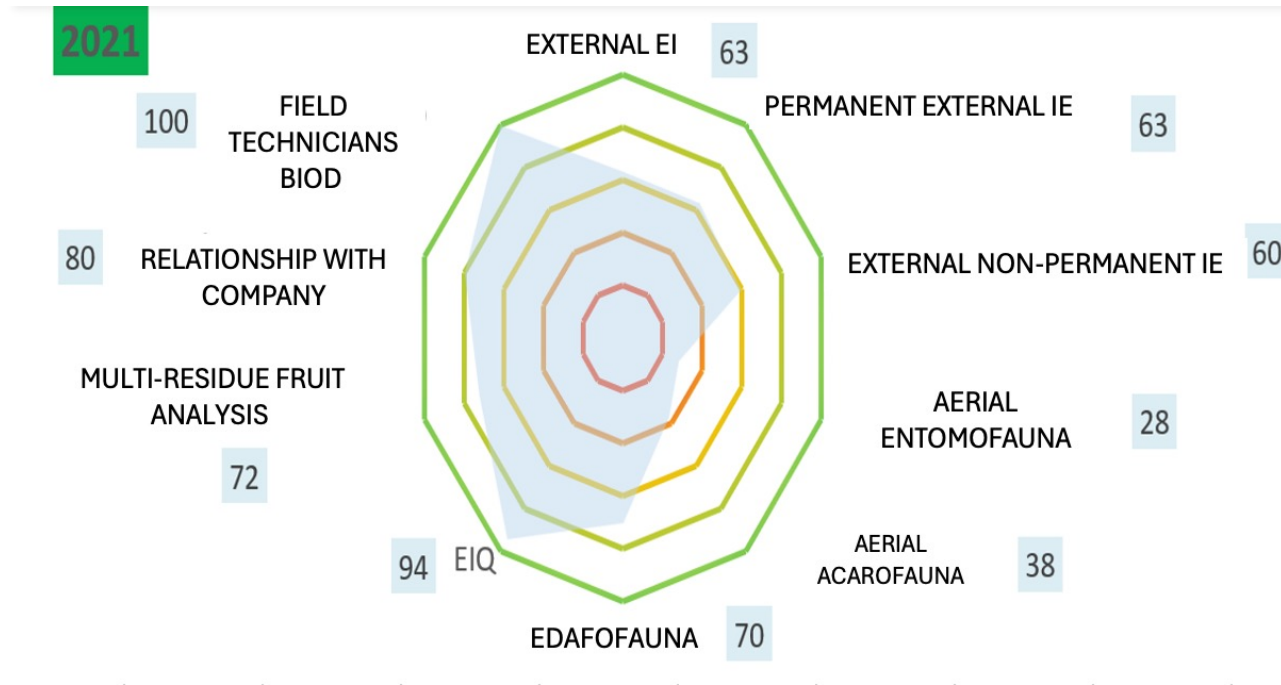


## 7. Edaphofauna



# PROMOTION OF BIODIVERSITY

## Criteria aligned with the Food For Biodiversity Basis Set



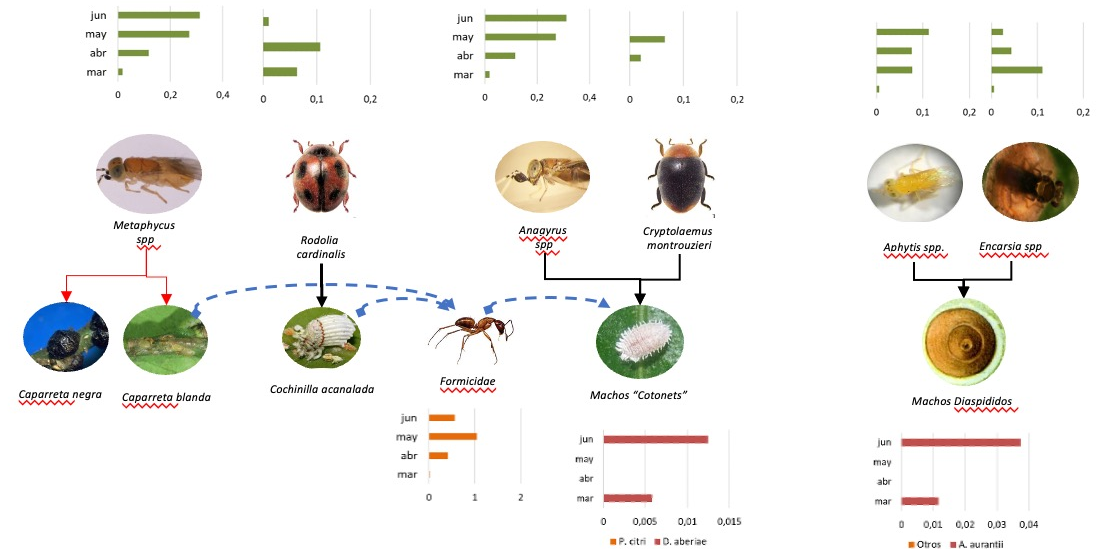
# KEY ASPECTS OF BIODIVERSITY MONITORING AND PROMOTION

- Decision support: Aerial Entomofauna.

In order to obtain an overall view of the farm's ecosystem, pest have been related to their parasitoids and predators.

- Analysis of internal ecological and non-permanent infrastructures: actions

The change in the management of the vegetation cover from interline to mechanical management is further developed. Likewise, species that improve soil properties and compete against other invasive species present on the farm are selected; and others are selected to provide food (pollen and nectar to the auxiliary fauna).



# HELP IN MAKING DECISIONS: SOIL EVALUATION



Thysanoptera

gamásids

anistids

oribatids

Collembola

phytophagous

predators

saprophagus

¿?

Well studied

Physical properties

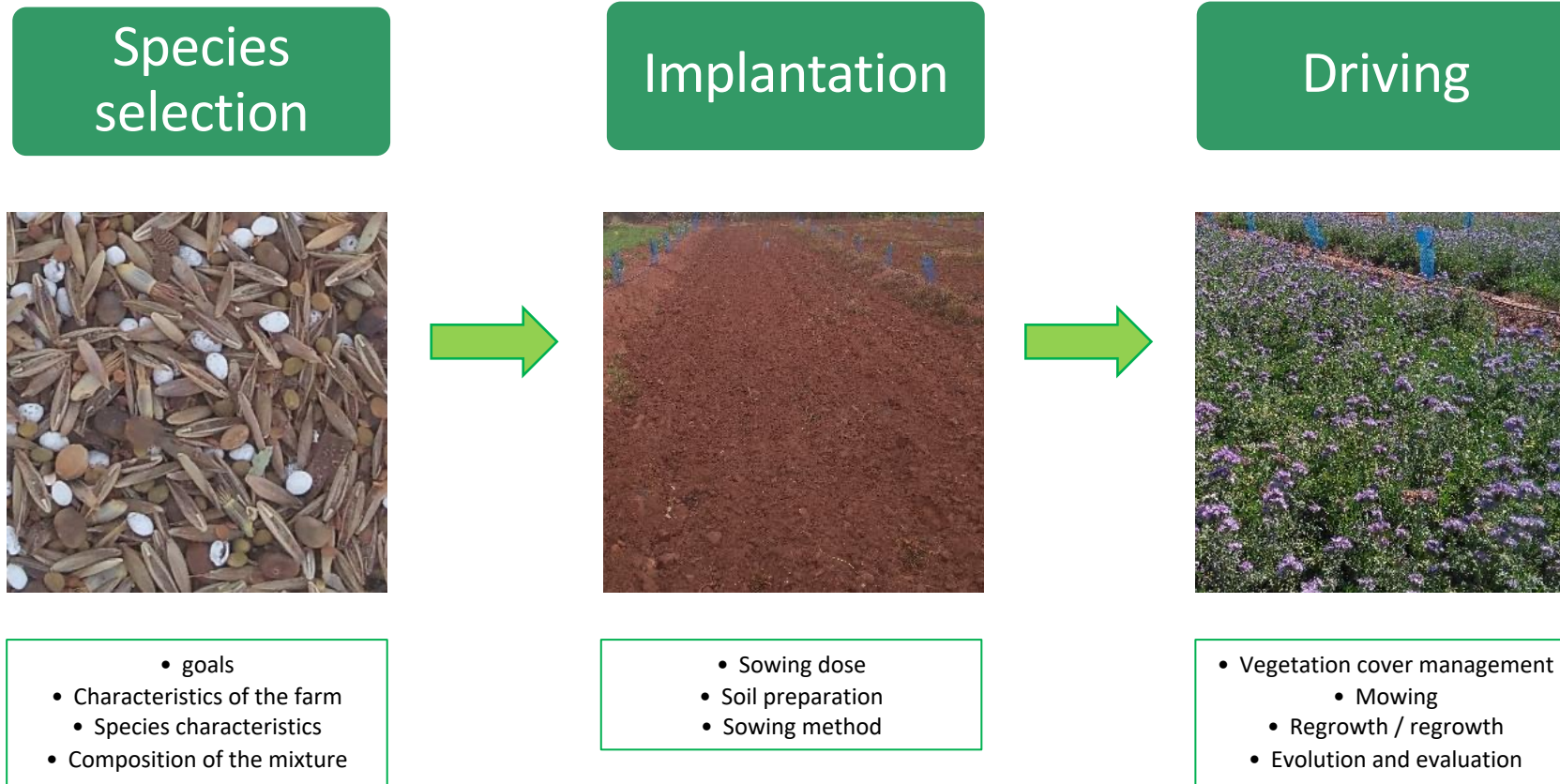
Chemical properties

Biological aspects

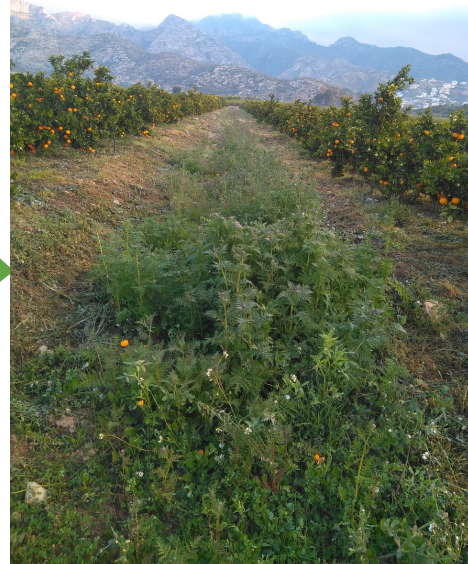
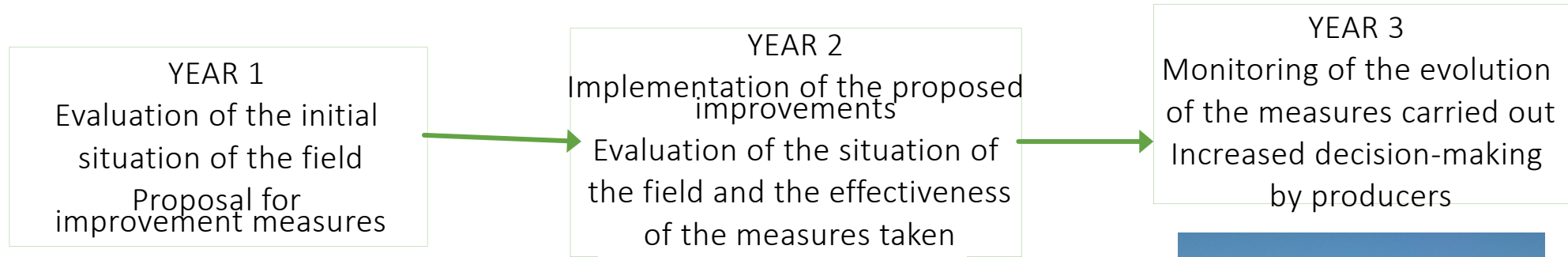
Determine the presence of BIOINDICATORS, which inform about the quality and edaphic stability



# MULTI-SPECIES PLANTING PROPOSAL



# PROCESS OF ACCOMPANIMENT AND IMPLEMENTATION OF CONCRETE MEASURES TO IMPROVE BIODIVERSITY FOR ApTRANSITION TO SUSTAINABILITY





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Nuclear Safety and Consumer Protection



Federal Agency for  
Nature Conservation

based on a decision of  
the German Bundestag

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