5MPCW
CY-2025

5TH MEDITERRANEAN PLANT CONSERVATION WEEK
Building alliances for plant diversity conservation in the Mediterranean
April 07-11, 2025, Limassol, Cyprus

Conservation translocation of the endangered *Anthemis aeolica* Lojac. on small islets of the Aeolian archipelago

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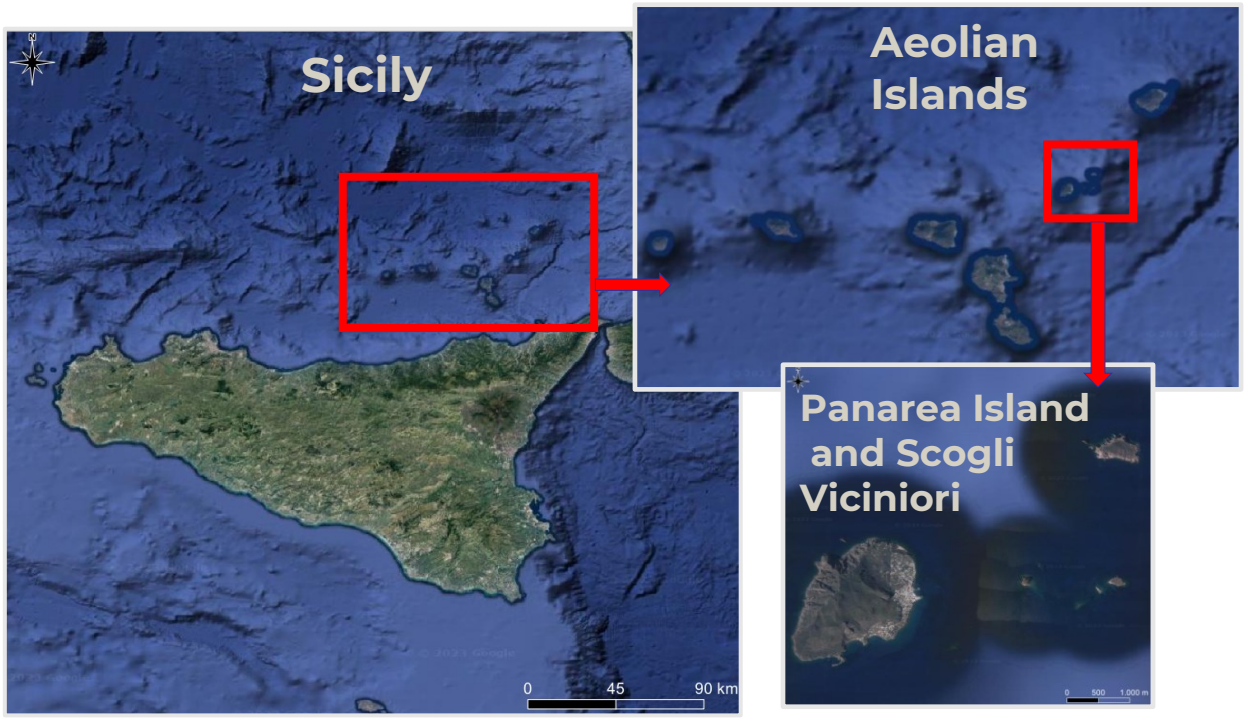


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Historical range and actual distribution



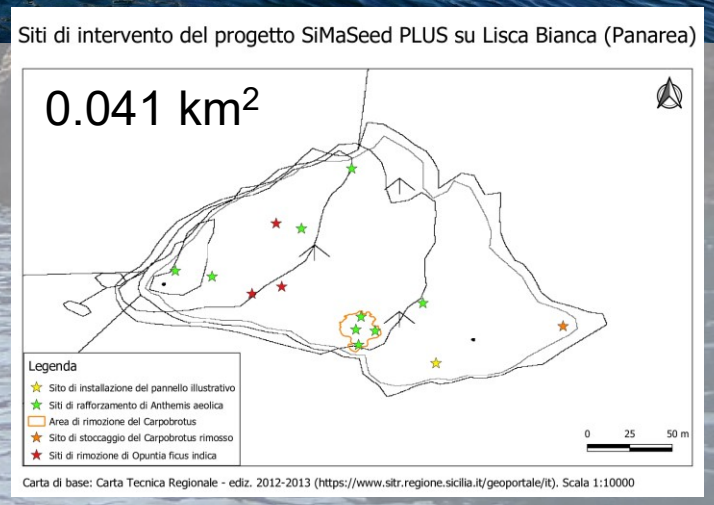




Intervention sites

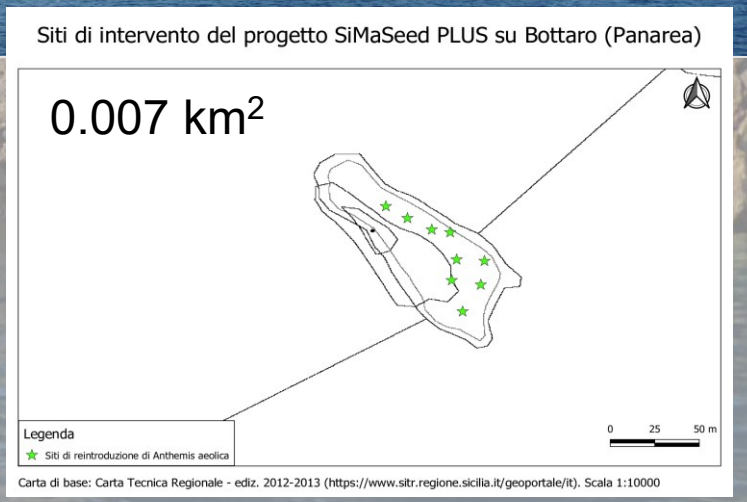
Reinforcement





Reintroduction





Preparatory action: eradication of *Carpobrotus acinaciformis* on Lisca Bianca

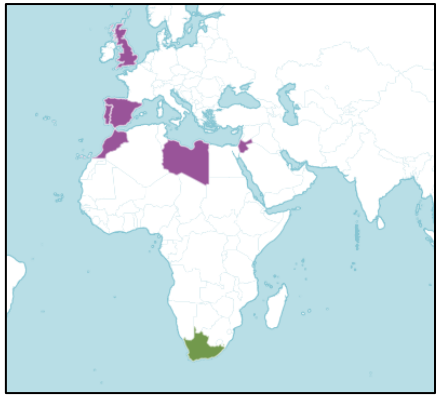






Manual eradication without the use of herbicides

Native
Invasive



Native from South West Cape Province (South Africa)

Invasive in the Mediterranean area







Ex-situ conservation: plant propagation from seeds

Seeds were sown directly on cell trays. To maximize plant emergence, 5 seeds were used for each cell.

The cells were incubated in a growth chamber at the alternating temperature of 20/10 °C

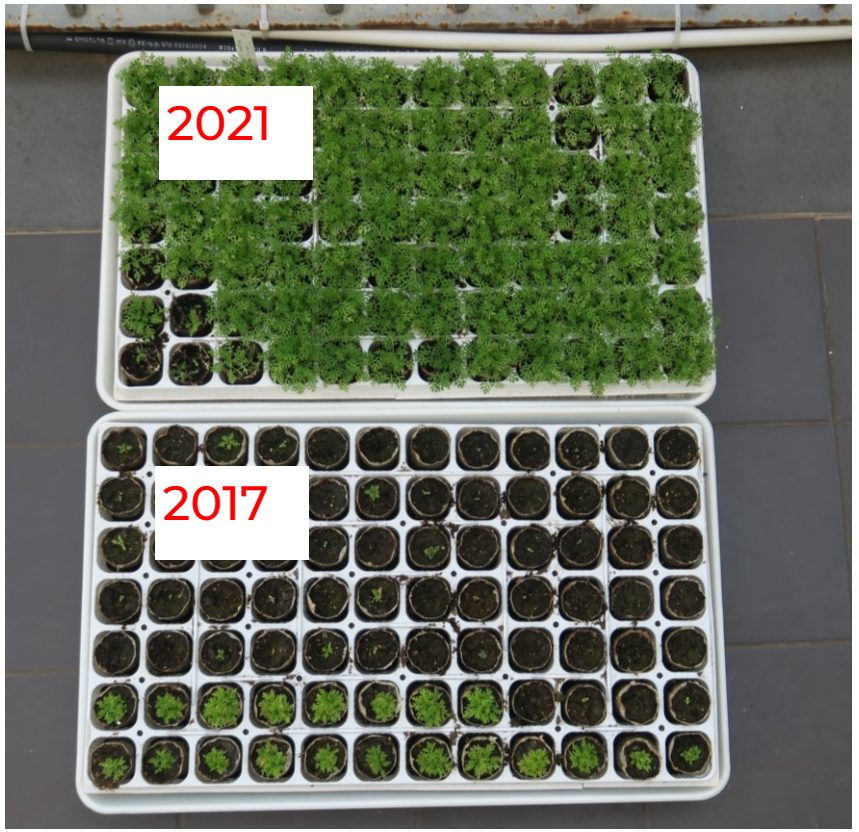
The production of plantlets was more efficient using cypselae younger than two years.

The plants were moved to open air after two months, to acclimatize before transferring to the intervention sites.







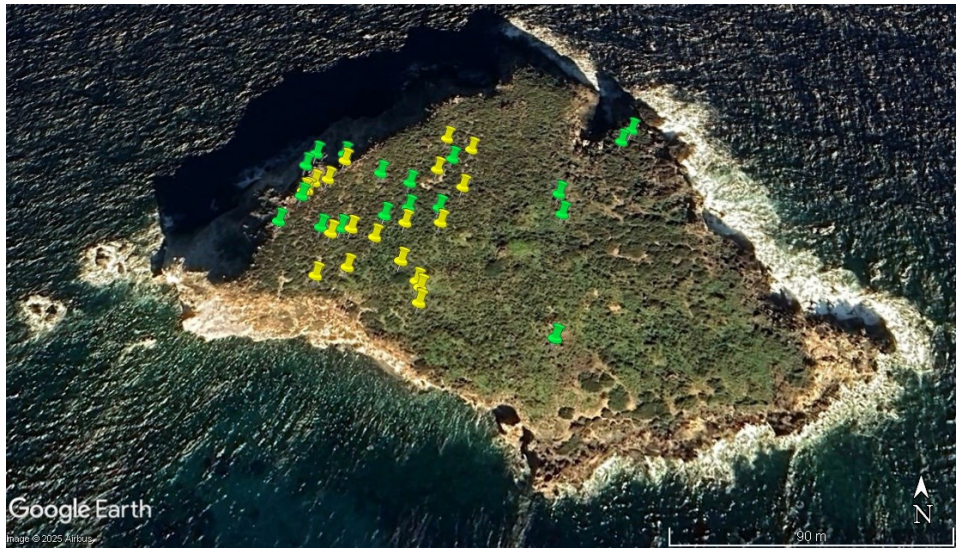


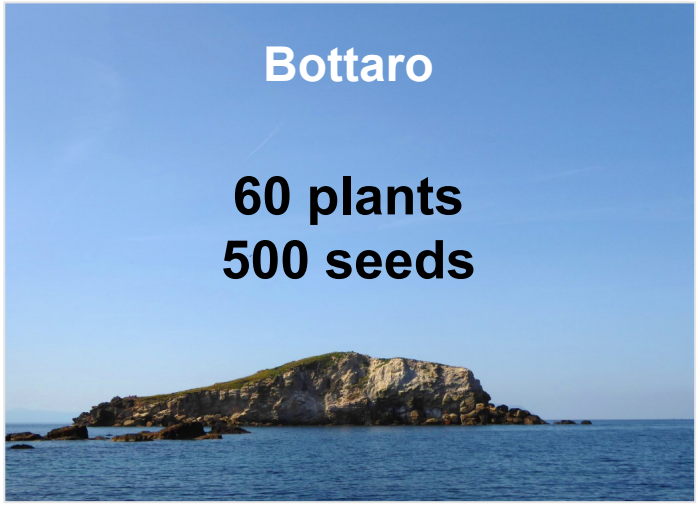




Plant translocation









Seeds Plants







Seeds sown in miniplots and glued to toothpicks

Experimental design on Lisca Bianca

Test the legacy *Carpobrotus acinaciformis* on plant survival and the effect of organic hydrogel (derived from cladodes of *Opuntia ficus-indica*) as soil amendment.



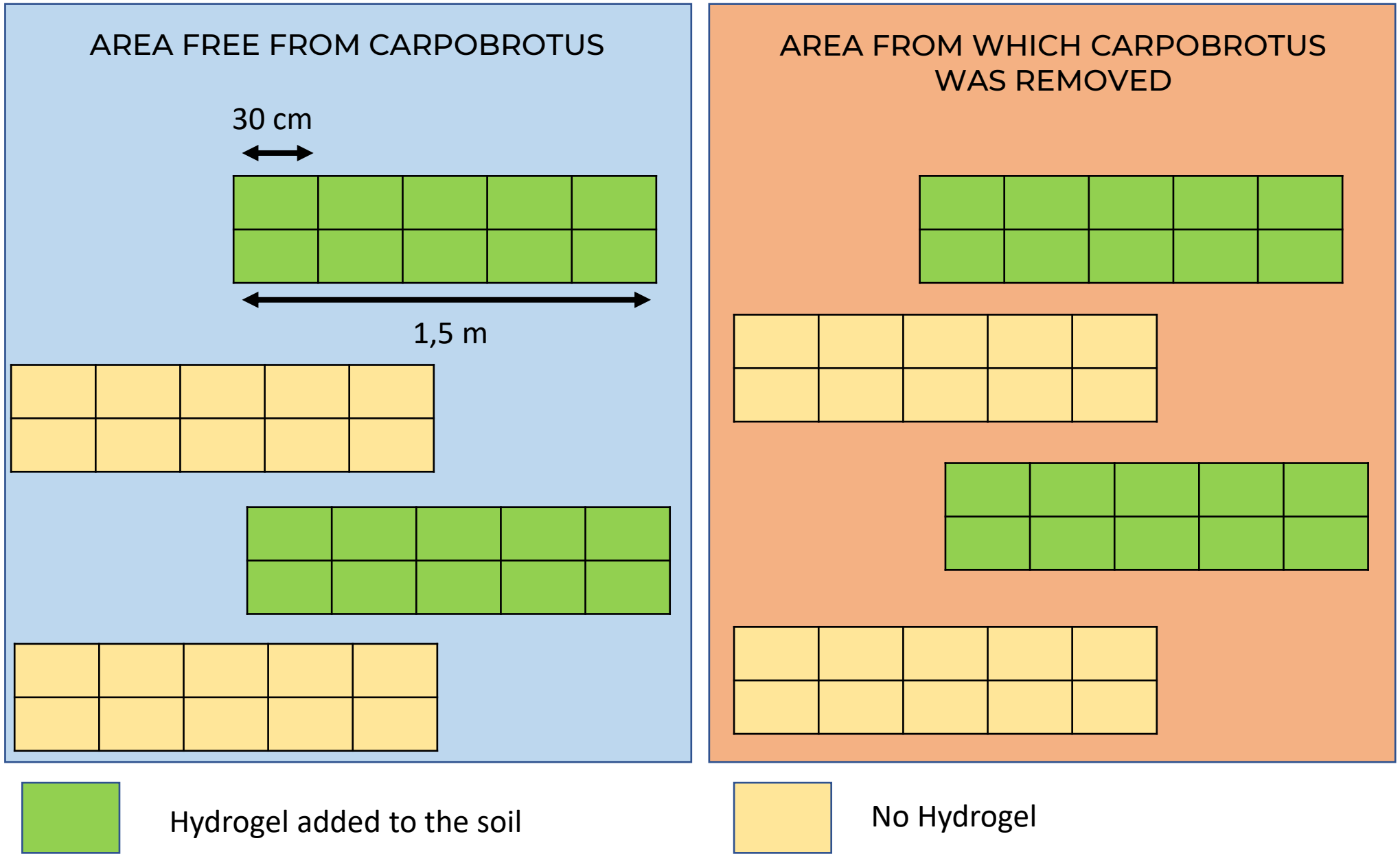






The experiment was replicated in two seasons: spring (May 2023) and autumn (October 2023)

Experimental design for plant reintroduction

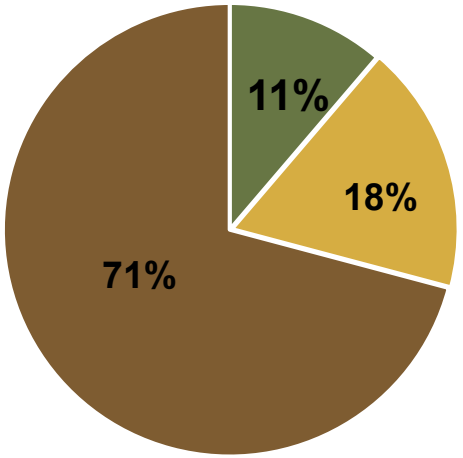


Results: reinforcement plots in Lisca Bianca

151 plants were planted in October 2023 in reinforcement plots located on sheltered micro-sites

Survival and regeneration to October 2024









1000 seeds sown in 20 miniplots in July 2023



May 2024 39 seedling survived



October 2024 all seedlings disappeared

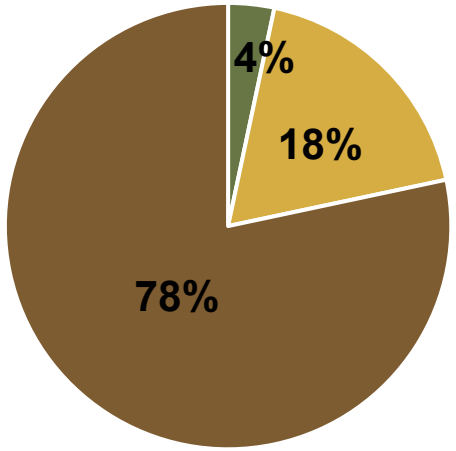


Results: reinforcement plots in Bottaro

60 plants were planted in October 2023 in 10 plots located on sheltered micro-sites.



Plant survival and regeneration to October 2024





500 seeds sown in 10 miniplots were located in the higher part of the island, to favour dispersal, in July 2023

All the seed plots were destroyed by seagulls

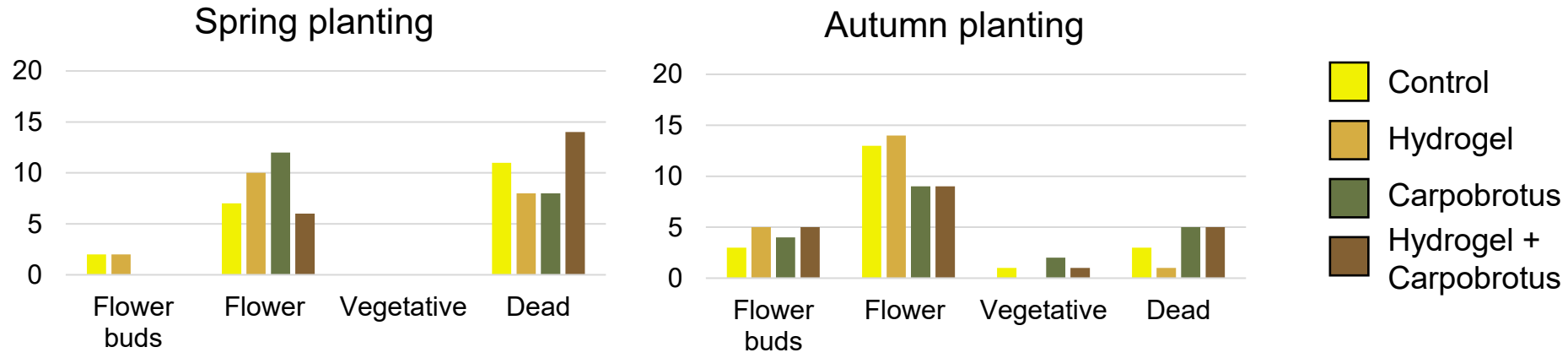


Results: experimental plots in Lisca Bianca

160 plants in 16 plots

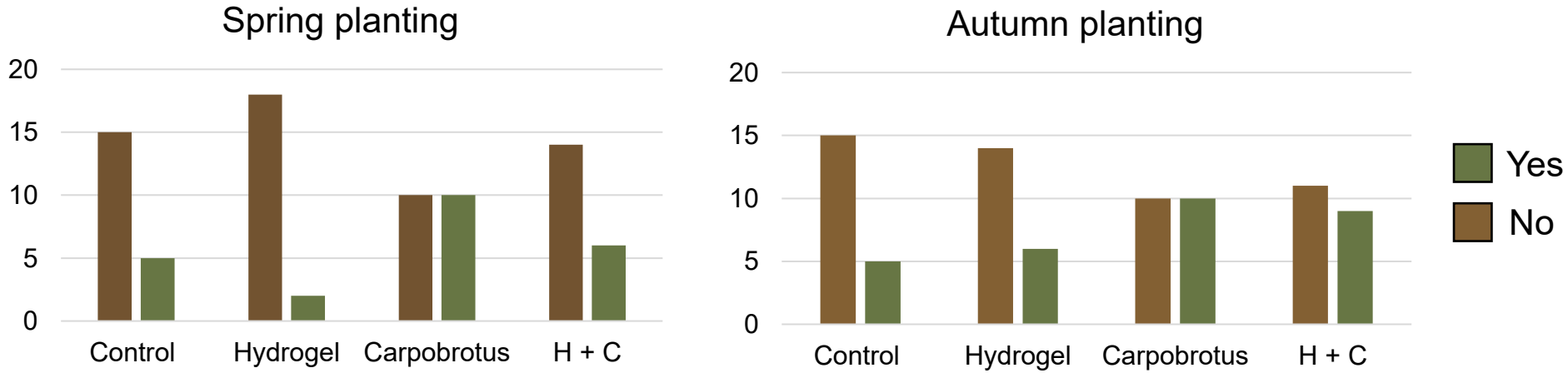
Plant phenology in May 2024





Fruiting in October 2024





Conclusions

- It is preferable to use plants instead than directly sowing the seeds.
- The critical time for plant survival is the first summer after germination.
- Translocation season is the more important factor influencing plant survival and regeneration.
- The presence of soil amendment and the legacy from *Carpobrotus* does not have apparently influence plant regeneration.
- Microsite topography and surrounding vegetation can significantly influence plant survival.



Thank you for your attention!

A special thanks to:

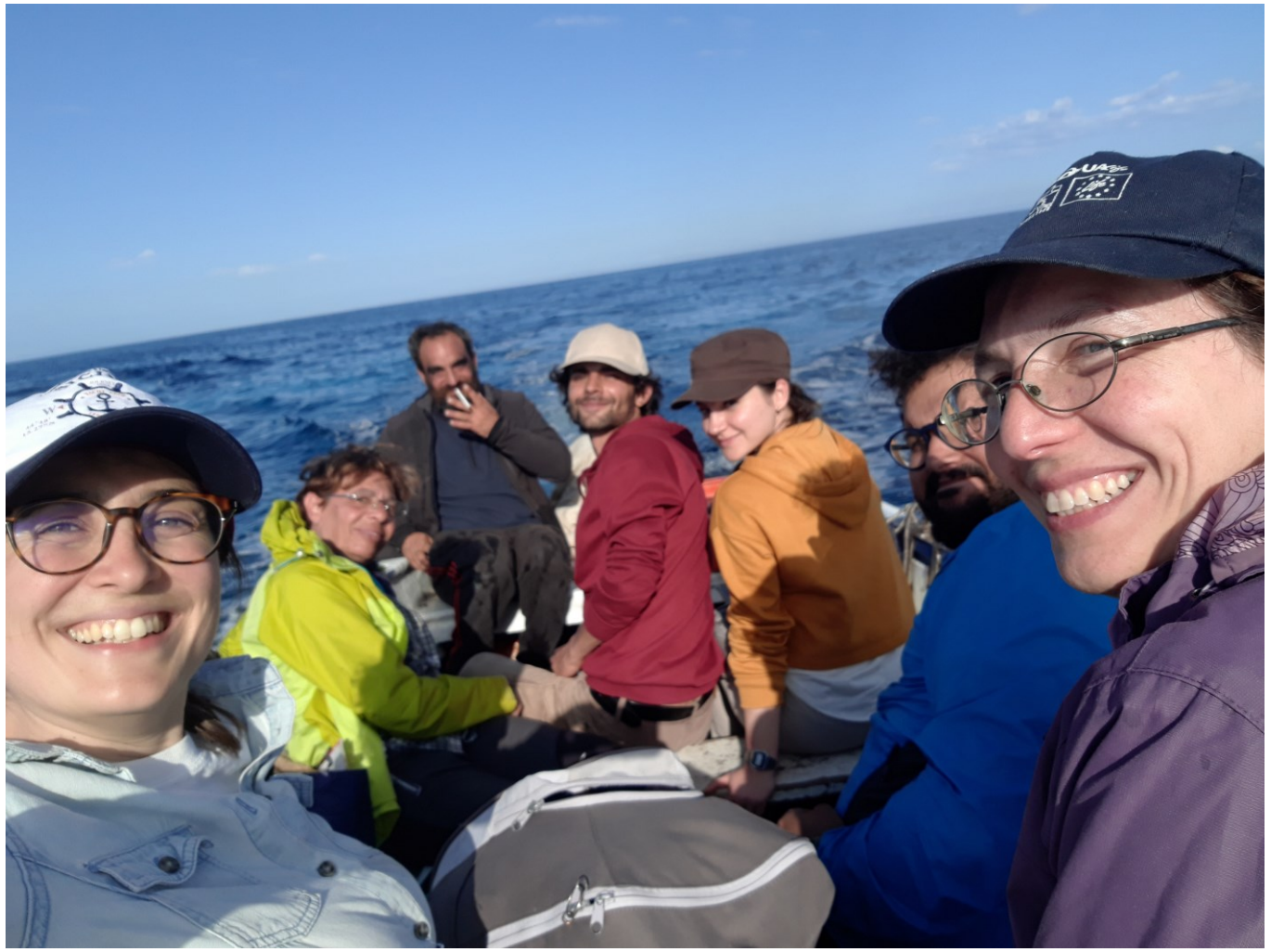
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