



4th MPCW

VALENCIA | 23-27 OCTOBER | 2023

Integrate approach of *ex situ* and *in situ* conservation of *Linaria flava* subsp. *sardoa*, an endangered species of Habitats Directive

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Introduction

The protection of plant diversity is regulated by international treaties and conventions, by national and regional laws relating to the conservation of natural and semi-natural habitats, flora, and fauna.



Aims

Evaluating the seed germination behavior of *Linaria flava* subsp. *sardoa* under controlled and field conditions, and the response of *in situ* seed germination after IAS eradication in one selected natural site.



Linaria flava (Poir.) Desf. subsp. *sardoa* (Sommier) A.Terracc.

3 From Coghinas (North Sardinia)



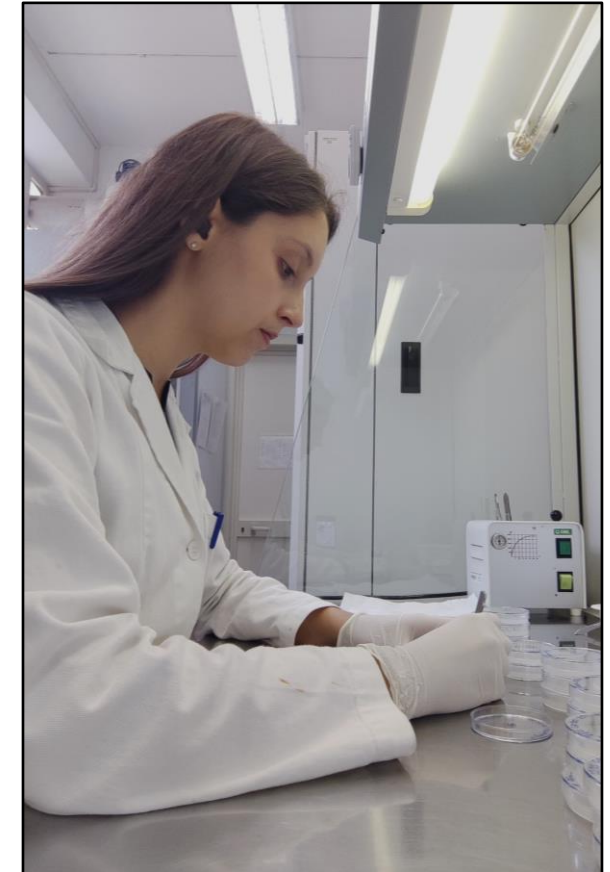
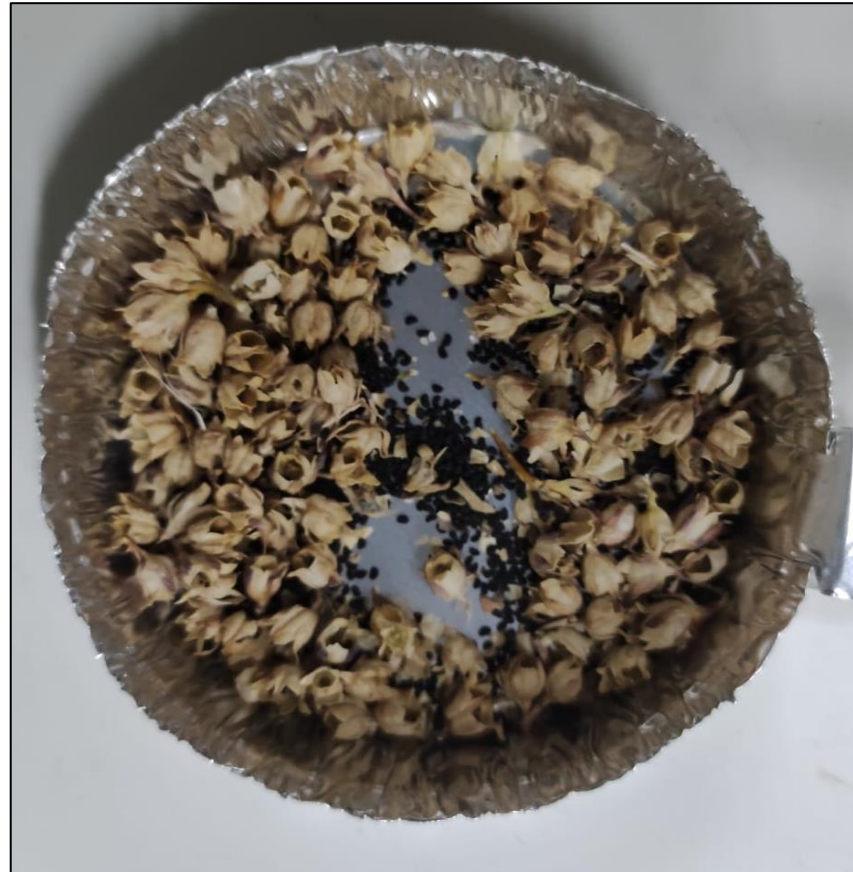
2 From Capo Ferrato (South-East Sardinia)



1 From Molentargius (South Sardinia)

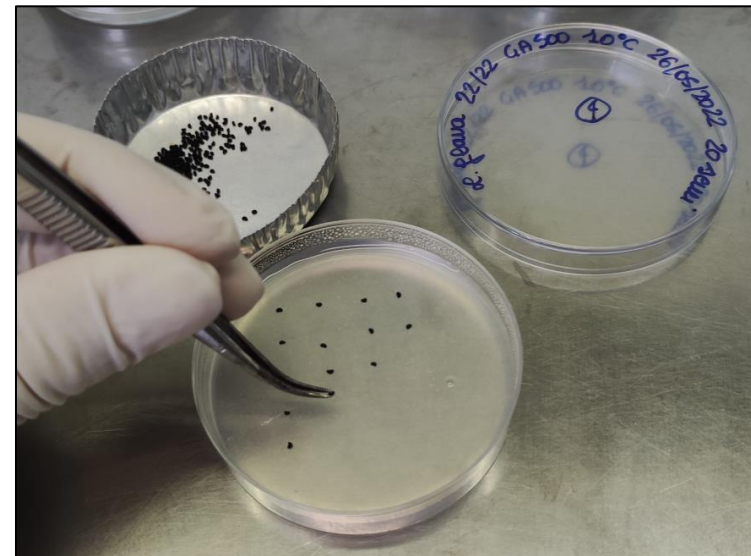


Germination tests were performed in the laboratories of Sardinian Germplasm Bank



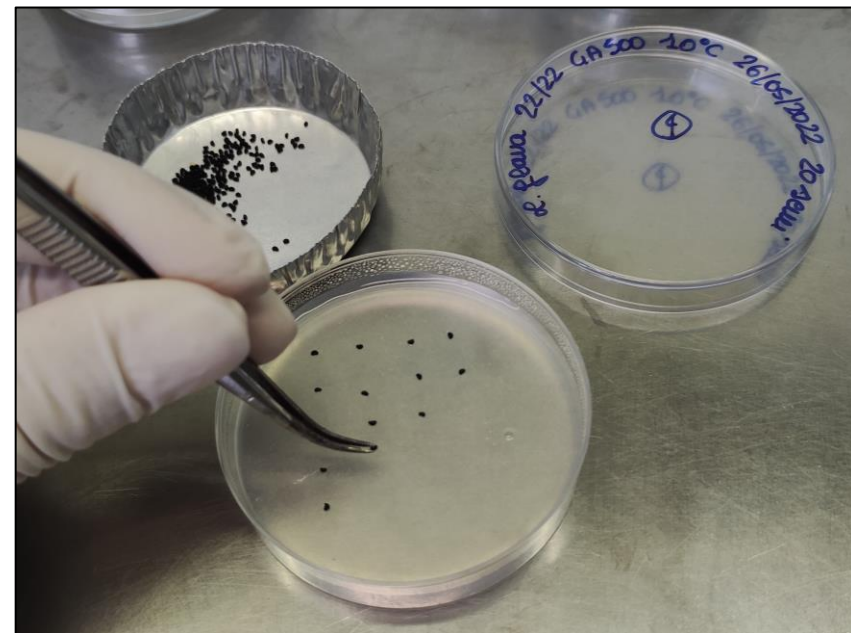
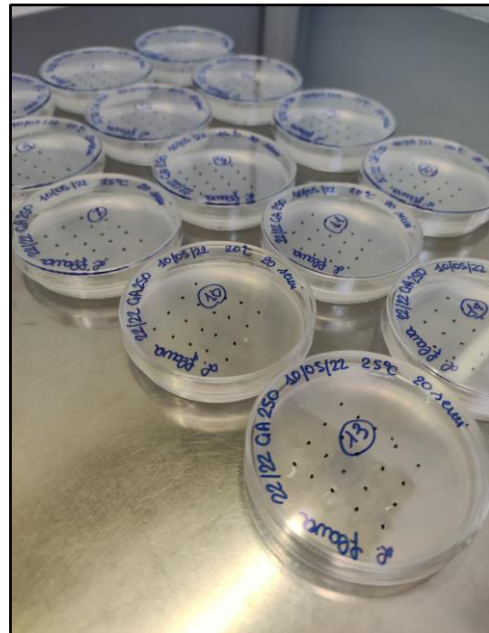
Germination tests with Capo Ferrato population

5 °C	10 °C	15 °C	20 °C	25 °C	30 °C	25/10 °C
Control	Control	Control	Control	Control	Control	Control
GA3 (125, 250, 500 mg/L)	GA3 (125, 250, 500 mg/L)	GA3 (125, 250, 500 mg/L)	GA3 (125, 250, 500 mg/L)	GA3 (125, 250, 500 mg/L)	GA3 (125, 250, 500 mg/L)	GA3 (125, 250, 500 mg/L)
Warm (W)	Warm (W)	Warm (W)	Warm (W)	Warm (W)	Warm (W)	Warm (W)
Cold (C)	Cold (C)	Cold (C)	Cold (C)	Cold (C)	Cold (C)	Cold (C)
W+C	W+C	W+C	W+C	W+C	W+C	W+C
C+W+C	C+W+C	C+W+C	C+W+C	C+W+C	C+W+C	C+W+C
Dry After Reopened (DAR)	Dry After Reopened (DAR)	Dry After Reopened (DAR)	Dry After Reopened (DAR)	Dry After Reopened (DAR)	Dry After Reopened (DAR)	Dry After Reopened (DAR)

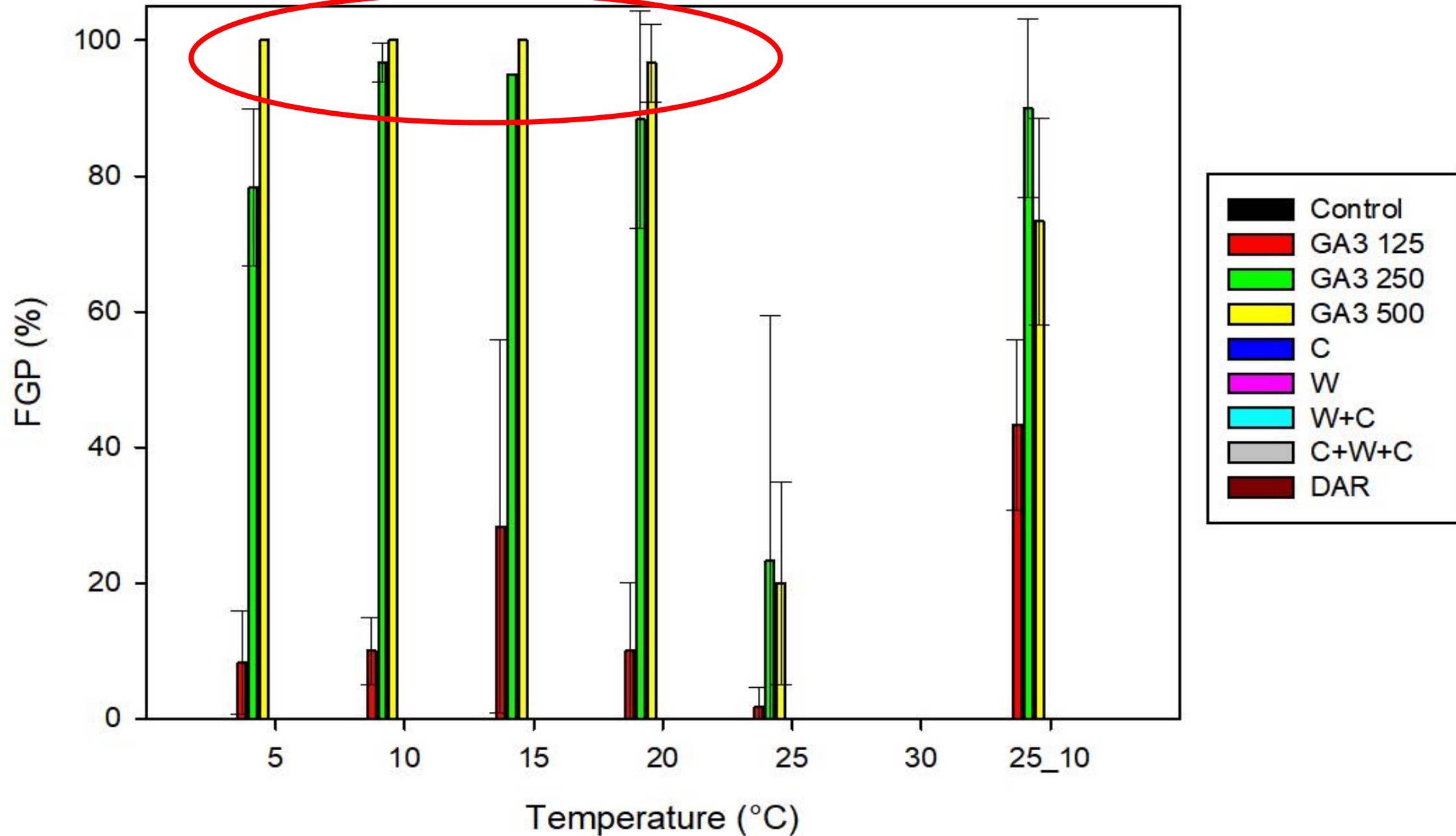


Germination tests with other populations

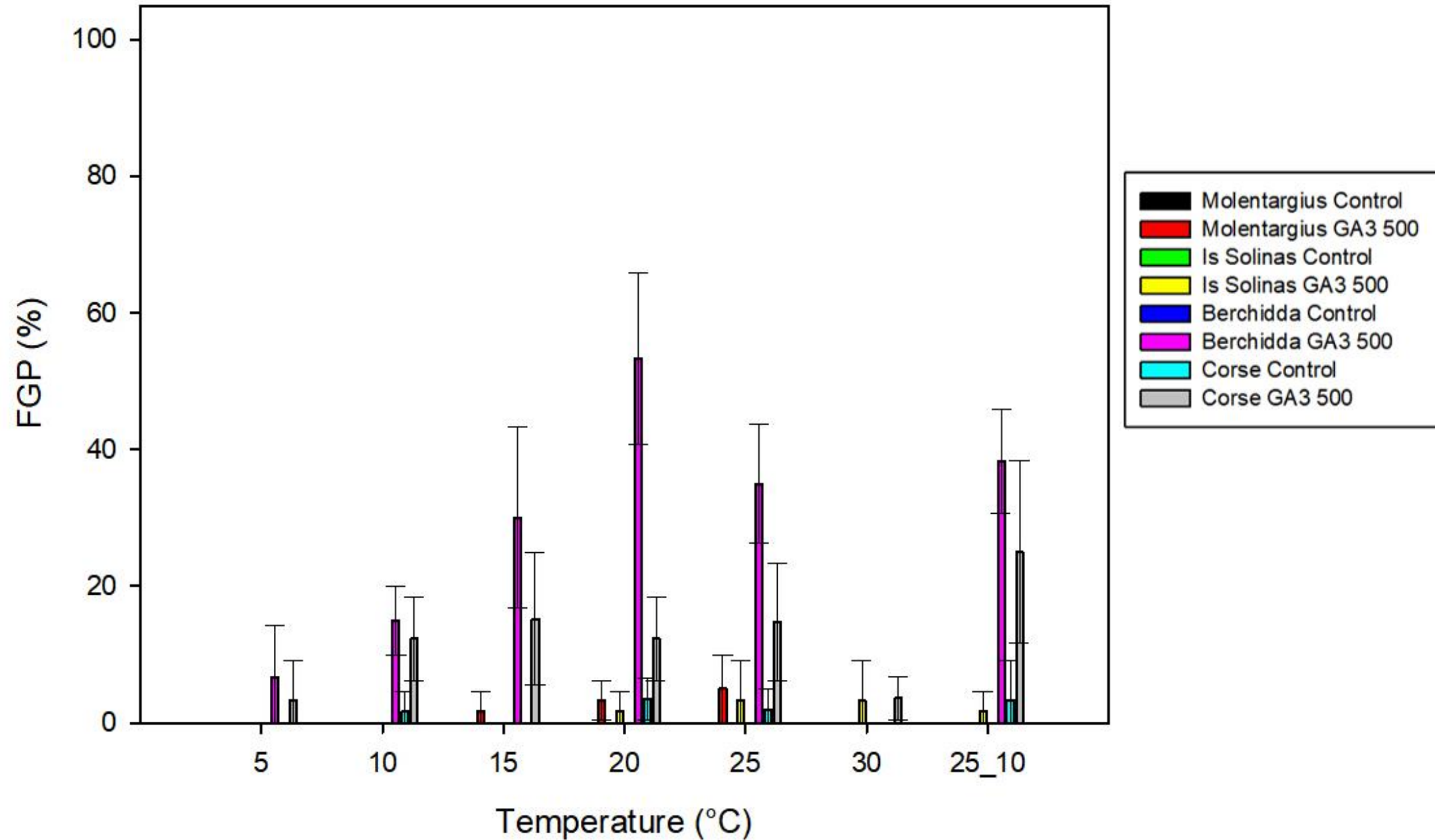
5 °C	10 °C	15 °C	20 °C	25 °C	30 °C	25/10 °C
Control	Control	Control	Control	Control	Control	Control
GA3 500 mg/L	GA3 500 mg/L	GA3 500 mg/L	GA3 500 mg/L	GA3 500 mg/L	GA3 500 mg/L	GA3 500 mg/L



Germination test results for the Capo Ferrato population



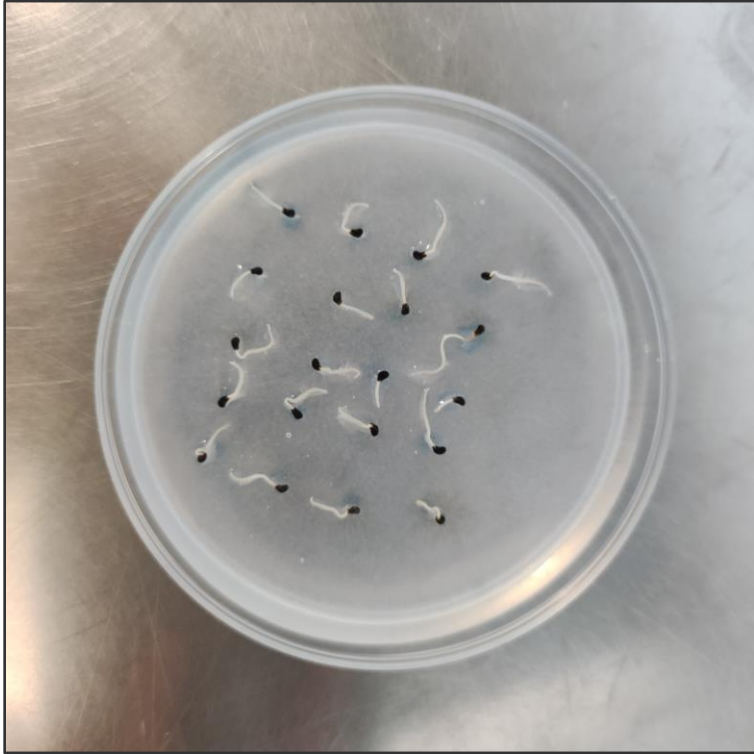
Germination test results for other populations



Seed germination phenology in the field



In the population of Molentargius Regional Park, where in 2022 the invasive species *Carpobrotus* spp. has been eradicated, in April 2023 seeds were collected and placed in fine-mesh polyester envelopes and buried in soil at a depth of 2–3 cm.



Conclusion

New and useful information for implementing conservation strategies of a threatened species.



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Thank you for your attention

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Ludovica Dessì (Sardinian Germplasm Bank, Centre for Conservation of Biodiversity)