



Scheda Proposta Progetto

CIP XFAJWC

Dati proposta

Acronimo

CAWMED (rev.1)

Titolo

Climate Adaptive Weed Management in Mediterranean Globe artichoke Systems: Integrating Agronomic Practices to Combat Water Scarcity

Durata in mesi

24

Descrizione

The Mediterranean region is currently facing exceptional challenges due to severe water scarcity and the increasing frequency of extreme drought events. Under these conditions, the globe artichoke (*Cynara cardunculus* L. var. *scolymus*) is a cornerstone of Italian agriculture which is now under significant threat from weed competition. Weeds act as "water thieves," aggressively competing with crops for limited soil moisture and compromising yield stability. Traditional weed management relies heavily only on synthetic herbicides and intensive tillage, both of which are becoming increasingly unsustainable. The European Union's "Farm to Fork" strategy mandates a 50% reduction in chemical pesticide use by 2030, while frequent plowing accelerates soil degradation and moisture loss. Therefore, there is an urgent need for climate-adaptive strategies that protect both crop productivity and environmental health. This project, "Cynara-Smart-Weed," hosted at the University of Catania (Di3A) under the supervision of Dr. Gaetano Pandino, addresses three critical knowledge gaps: the thermal stability of *Cynara cardunculus* allelochemicals under field-realistic temperatures; the drought-modified Critical Period of Weed Control (CPWC); and the integrated performance of bio-herbicides, biochar seed coating, vermicompost, allelopathic mulching and precision spot-spraying as a unified climate-adaptive system. Through four interconnected work packages combining HPLC-MS phytochemistry, precision UAV-assisted field trials and soil biological analysis, this fellowship will deliver the first field-validated bio-based weed management protocol for Mediterranean globe artichoke, directly supporting Europe's Green Deal objectives while establishing a transferable knowledge bridge between Italian and Pakistani sustainable agriculture.

Stato

INVIATA

Proponente

PANDINO, GAETANO

Struttura proponente

DI3A

Ambito

INTERNAZIONALE

Ente finanziatore

COMMISSIONE EUROPEA

Bando di riferimento

HORIZON-MSCA-2026-PF-01

Dati economici

Costo complessivo

€ 145.248

Finanziamento complessivo atteso

€ 145.248

Finanziamento previsto UNICT

€ 145.248

Cofinanziamento previsto UNICT

€ 0



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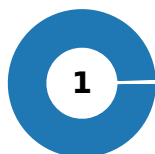
Componenti (1)

#	Nominativo	Ruolo	Carriera**	Struttura	ERC	Ore*
1	PANDINO, GAETANO	RESP_SCIENTIFICO	RD	DI3A	LS	1

* ore stimate

** PO - Professore Ordinario; PA - Professore Associato; RD o RM - Ricercatore TD; RU - Ricercatore

Distribuzione componenti per struttura



■ DI3A: 1 (100%)