



Practice Abstract N° 27

How cover crops selection support sustainable weed management in Mediterranean vineyards

INTRODUCTION

In Mediterranean viticulture, weeds represent a major constraint, often leading farmers to depend heavily on herbicides. The Horizon Europe project 'Agroecology for Weeds – GOOD' is testing agroecological weed management strategies across Europe as an alternative to agrochemicals. In this context, the use of cover crops is being explored in Calabria (Southern Italy) as an effective option to limit weed development, and foster biodiversity in both organic and conventional vineyards.



Organic (on the left) and conventional (on the right) vineyard living labs.

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MAIN RESULTS – OUTCOMES

- 🌍 *Cynodon dactylon* L., *Senecio vulgaris* L. and *Brassica fruticulosa* were the most recurrent weed species in both organic and conventional vineyards.
- 🌍 *Vicia faba minor* and the mixture of *Vicia villosa* and *Avena sativa* were particularly effective to reduce weed pressure under organic farming.
- 🌍 Among the tested species, *V. villosa* and *A. sativa* provided the strongest suppression of weeds by ensuring a good soil coverage.



Vicia faba L. *minor*



Vicia villosa Roth. and *Avena sativa* L.

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PRACTICAL RECOMMENDATIONS

- 🌍 **Select cover crops species that adapt well to local Mediterranean semi-arid conditions.**
- 🌍 **Ensure timely sowing and proper seed rates** to favor rapid cover crops establishment and minimize weed competition.
- 🌍 **Use legume–cereal mixtures** to optimize ground cover, diversify cropping systems and increase resilience against weeds.



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Do you want to learn more about agroecological weed management?



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