



AGROECOLOGY FOR WEEDS

Practice Abstract N° 29

Selecting cover crops for weed management in vineyards of Galicia (NW Spain)

INTRODUCTION

In Europe, policies such as the Green Deal and the Farm to Fork strategy have been introduced to promote sustainable practices in sectors such as viticulture and to reduce the use of harmful chemicals, including herbicides. In general, traditional tillage methods can contribute to soil erosion, making alternative weed control techniques, such as the use of cover crops, crucial for long-term sustainable productivity. In light of this, a study was conducted in the vineyard living lab of Galicia (NW Spain) to evaluate the establishment of three different cover crop mixtures: 1) Legume mixture (*Trifolium repens* var. Asgard, *Trifolium pratense* var. Lucrum, and *Trifolium subterraneum* var. Dalkeith), 2) Dicotyledon mixture (*Raphanus sativus* var. Triangel, *Brassica carinata* var. Utopía, *Brassica juncea* var. Brown, and *Eruca sativa* var. Tiara), and 3) Grass mixture (*Lolium perenne* var. Bijou and *Lolium multiflorum* var. Locobelo).

MAIN RESULTS – OUTCOMES

All CC mixtures were well established in their plots. The highest production was achieved in Dycoteledon ($3359.27 \pm 887.97 \text{ kg}\cdot\text{ha}^{-1}$) and Clover ($3070.46 \pm 1151.06 \text{ kg}\cdot\text{ha}^{-1}$) plots.

Regarding the botanical composition, in all plots with cover crops, several weed species were found, such as *Silene latifolia* and *Vulpia* sp. *Vulpia* sp. occupied 16% of the plots in grass treatments and 46.6% of the plots where dicotyledon species were sown. In any case, the control plots without cover crops presented a higher share of weedy species, with the dominant taxa being *Avenula* sp. (around 55%), *Bromus* sp. (40.18%), and *Avena* sp. (29.3%).



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PRACTICAL RECOMMENDATIONS

- Cover crops can serve as a feasible and effective alternative to traditional weeding practices such as tillage or herbicide use in the region.
- Cover crops may contribute to increased sustainability by helping to reduce soil erosion and enhance water retention.
- Using mixed-species cover crop mixtures could favor better establishment and improved weed suppression.
- Early sowing of cover crops might support more successful growth and more effective control of weeds.



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