

# Inter-row cover cropping: Spontaneous grass cover crops

The use of spontaneous flora growing in the inter-rows can bring great advantages to the olive orchards. Grass cover crops have advantages for erosion control and water retention as they provide effective soil protection and high biomass production. However, they require careful management and continuous monitoring to maintain productivity and maximize water availability, the most limiting growth factor in the Mediterranean area.

**DID YOU KNOW?**  
Most olive orchards in Spain show two distinctive areas along the lanes: inter-row and intra-row spacing, which facilitates the use of different IWM practices

Readiness for use:   

Efficacy:    

## How it works

- Natural grasses such as false barley (*Hordeum murinum*), a mix of brome grasses (*Bromus* spp.), annual ryegrass (*Lolium rigidum*) or annual meadow grass (*Poa annua*) are commonly used as spontaneous cover crops in the inter-row spacing of 2 m wide (Figure 1).
- They have low installation costs for farmers since they only need to be sown the first 2-3 years, whereupon they are self-seeding by the seed bank produced. It is essential a proper weed seedbank that allow grass species to emerge spontaneously during the cold rainy period.
- The great diversity of weeds (weeds with short or long cycle; annual, biennial and perennial, dicotyledonous or monocotyledonous; erect or creeping) hampers their management. They can be controlled simply by applying a broad-leaf herbicide in the intended plant cover area, which eliminates the other weeds.
- They must grow in autumn and winter when water is available (Figure 2). Once properly installed and after the grass phenological stages of seed production in late spring, they should be killed off by chemical control (contact and systemic authorized herbicides) or mechanical mowing (brush cutter and shredder), so as to minimise soil water use by the cover crop.
- In places with dry and hot springs such as southern Spain, killing methods are not necessary because it is naturally dried at late April-early May (Figure 3).
- They are especially recommended on soils where steep orography makes sowing of cover crops complicated (mountains and steep-slopes areas), on arable land with great weed species diversity that can provide a dense protective cover crop and in organic olive orchards where herbicides are not used.



**Figure 1 and 2.** Spontaneous grass cover crops (*Bromus* spp.) in the inter-row spacing (Photo: V.Pedraza, IAS-CSIC)



**Figure 3.** Grass cover crops naturally dried in spring (Photo: V.Pedraza, IAS-CSIC)

## Read more

[Cover crops in olive-field trials of southern and northern Spain](#)

[The most important management options for olive orchards in Spain](#)

[A botanical overview of the most common spontaneous grass cover crop species in olive orchards](#)

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