

Intra-row pruning wood residues incorporation

Olive orchards generate a significant volume of pruning wood residues after harvesting. It consists of leaving the soil untilled and covered with olive leaves, wood chips or pruning residues. The application of plant residue mulches could provide several benefits in the intra-rows. It can be used separately or integrated with herbicides.

DID YOU KNOW?
A combination of no tillage methods with the application of pruning wood residues is a very common practice covering soil along intra-row spacing in Spain.

Readiness for use: 

Efficacy: 

How it works

These organic mulches help to reduce the use of herbicides and supply organic matter, contribute to erosion control and reduce phytosanitary contamination hazards

- Farmers can use the residues generated on their farms, leaving the olive pruning remains on the soil surface in the middle of the intra-row spacing (Figure 1).
- Pruning wood residues have to be chopped up and scattered on the soil surface by crushers or choppers (Figure 2).
- According to conservation agriculture practices, a minimum of 30% soil cover is needed to get the soil improvements and the covered soil is often extended to 2 m wide (Figure 3).
- There is a risk of introducing pathogens like *Verticillium dahliae* through leaves and pruning residues from sick trees. It is recommended not to incorporate them into the soil by tillage, thus also ensuring long-term decomposition and soil protection.
- The effects depend to a great extent on the quantity of debris, and it is considered that for the effect to contribute significantly to weed management, the quantity of residues should be around 7–8 kg/m².
- This technique can help to ensure partial weed control due to the physical barrier they constitute. However, weed control should be completed with herbicides, due to the difficulty of controlling some weeds.



Figure 1. Olive pruning remains.
Photo: V.Pedraza, IAS-CSIC



Figures 2 and 3. Incorporation of pruning wood residues along the intra-row spacing of fields with different inter-row soil management (tillage and cover cropping). Photos: 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](#)

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