

Incorporation of prunings into soils

Goal	Increase soil organic matter content and aggregate stability.
Target group	Permanent crops, olive crops.
Description of the measure	<p>Pruning residues of olive orchards or other permanent crops improve soil fertility and protect soil against water erosion.</p> <p>Pruning residues must be chopped on the ground and leave as cover.</p> <p>The pruning residues chopped must be spread on the soil surface without using tillage, these residues will be slowly decomposed protecting the soil in the long term. The chopping will be done as fine as possible in order to obtain the best results and to facilitate the rest of necessary labors for the field, as for instance the harvest. Once the pruning residues are chopped mechanically plagues risks such as borer disappear.</p> <div data-bbox="620 902 1166 1312" data-label="Image">  </div> <p>Clippings of the olive orchard are left behind and will be chopped and spread later.</p>
Suitable sites	<ul style="list-style-type: none"> ▪ Whole orchard area
How a good implementation looks like	<ul style="list-style-type: none"> ▪ The pruning residues must be spread on the surface ▪ no tillage must be used ▪ The chopping should be done as fine as possible
Effects on biodiversity (ecosystems, species, soil biodiversity)	<div data-bbox="360 1742 539 1816" data-label="Image">  </div> <p>Increase microbial biomass activity, thanks to the existence of active carbon in the soil. The increase of complexity in the soils benefits the biodiversity.</p>

Other positive effects/benefit for the farmer	<ul style="list-style-type: none"> ▪ Organic matter increase in the soil surface ▪ Organic nitrogen increase ▪ Soil structure improvement ensuring a bigger content of water in the soil. ▪ Erosion control, reducing runoff and losses of water and soil ▪ Allow a lower use of herbicides. ▪ Create a physical barrier that limits the weeds development, even more they generate allelopathic substances ▪ Sustainable soil management can determine optimal plant nutrition equilibrium, avoid nutrient accumulation in soils and leaching risks
Indicator/key data	<ul style="list-style-type: none"> ▪ Pruning residues chopped after pruning periods
Risk and further recommendations	<ul style="list-style-type: none"> ▪ Pay special attention to phytosanitaires risks, be sure that the clippings used and chopped doesn't originate from trees with plagues such as verticillium wilt
Timeframe (When to start a measure and anticipated time for implementation)	<p>Just after pruning periods.</p>
Additional special resources/equipment/skills needed	<p>Special machinery needed for the chopping</p>
Reference	<ul style="list-style-type: none"> ▪ www.juntadeandalucia.es/agriculturaypesca/ifapa/-/action/3a269130-1bb9-11df-b7e2-9dc1a0f432f2/e5747030-1bb8-11df-b7e2-35c8dbbe5a83/es/d37ec860-4634-11e0-9740-bd3181e5ef4b/alfrescoDocument?i3pn=contenid-oAlf&i3pt=S&i3l=es&i3d=e5747030-1bb8-11df-b7e2-35c8dbbe5a83&contentId=a665a388-9125-4a4b-a288-115cbe166dae ▪ www.sciencedirect.com/science/article/pii/S0304423812002555

Further information: [Knowledge Pool](#)

This Action Fact Sheet belongs to the training package for advisors of standard organisations and companies and was developed within the project LIFE Food & Biodiversity (Biodiversity in Standards and Labels of for the Food Industry). The main objective of the project is to improve the biodiversity performance of standards and sourcing requirements in the food industry by helping standard organisations to integrate efficient biodiversity criteria into their schemes and motivating food processing companies and retailers to include comprehensive biodiversity criteria into their sourcing guidelines.

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