

Alpeorujo, olive mill compost application for soil fertilization

Goal	Increase organic matter in soils and increase of yields
Target group	Olive crops
Description of the measure	<p>Alpeorujo, a solid residue from the olive oil extraction in mills, can be used as an organic amendment that can contribute to restoring the organic matter in soils. However, alpeorujo shall be stabilized before its use, due to nutrient richness and toxic compounds that can be potentially be leached to water bodies or affect soil biodiversity.</p> <p>The waste must be mixed with manure of sheeps or horses and pruning at different proportions, a compost place or installation must be built. These installations are small or medium-sized plants located on land belonging to oil mills. They consist of a waterproofed surface generally in reinforced concrete to prevent possible contamination of soil and aquifers. The alpeorujo is mixed with manures from sheep or horses and with the pruning or olive leaf itself from the cleaning of the olive, to give it structure and to add it to the generality to improve its nitrogen content. Simple, open composting systems are used that use mechanical flips to aerate the batteries. Once composted, the usual fate of the compost is to incorporate it into the groves of the olive groves associated with the mills themselves. More information about the process to produce compost</p>
Suitable sites	<ul style="list-style-type: none"> The mills must have their own place to compost the Alperujos
How a good implementation looks like	<ul style="list-style-type: none"> Measures to control the process of compost: Good relation C/N Compost Moist between 50-70 %
Effects on biodiversity (ecosystems, species, soil biodiversity)	<p>A fertile soil is a living soil that would increase biodiversity. In addition, well-structured and living soils are also more resilient to tackle climate change.</p> <p></p> <p>This practice has brought benefits both in the medium and long term related to the content of organic matter, such as the soil in general of the Andalusian olive groves. In addition, it has been quantified that producing alperujo compost in the amount needed to replace the N, P and K removed with the harvest costs less than half that of the chemical, individual and combined fertilizers that are currently used most.</p>
Other positive effects/benefit for the farmer	<ul style="list-style-type: none"> A great richness in organic matter, moderately acidic pH, a relatively low salt content, a slightly high C / N ratio and high potassium richness, mean nitrogen and lower phosphorus content. Waste management. Saving agricultural inputs Improvements in yields Self-sufficiency in fertilizers

Indicator/key data	<ul style="list-style-type: none"> ▪ Number of kg/ha of the alpeorujo compost used as fertilizer
Risk and further recommendations	Compost must have a right structure to avoid problems.
Timeframe (When to start a measure and anticipated time for implementation)	constantly
Additional special resources/equipment/skills needed	An initial investment must be done in the installations for compost. This investment is recovered after a few years due to the savings in fertilizers. Even more olive yields are increased with a good alpeorujo composted in between 8-10 %.
Reference	<ul style="list-style-type: none"> ▪ www.compostandociencia.com/2013/08/compost-de-alperujo-html/ ▪ Handook to make a good compost of Alpeorujo. https://www.juntadeandalucia.es/export/drupaljda/estudio_compost2.pdf ▪ www.agenciasinc.es/Noticias/El-abono-procedente-del-procesado-de-aceite-mejora-el-suelo-del-olivar ▪ www.academia.edu/18279612/Application_of_compost_of_two-phase_olive_mill_waste_on_olive_grove_Effects_on_soil_olive_fruit_and_olive_oil_quality ▪ www.olipe.com/blogwp/fertiliza-tu-olivos-huertos-y-arboles-frutales-con-organolipe/ ▪ www.olipe.com/blogwp/diferencias-entre-el-compost-vegetal-de-alperujo-organolipe-abonos-organicos-y-abonos-organominerales/ ▪ www.olipe.com/blogwp/aprovechamiento-y-reciclaje-de-los-subproductos-de-olivarera-los-pedroches/

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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