

Sidestream of the month

*(Examples for high potential waste, by-products and residues
from primary and secondary biomass resources)*

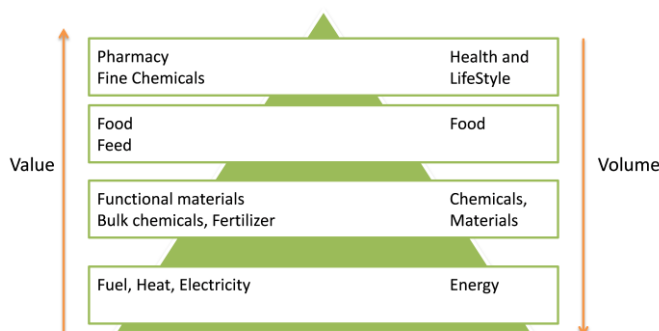
January 2018



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Olive leaves, olive stones and seeds

Instead of sending to landfill, composting or burning the sidestream directly after harvesting/ processing there are higher added values to be achieved applying a cascading and circular approach:



A) Highest added value

Bioactive compounds- olive stone flour

Seeds and stones of olives can be isolated by mechanical procedures and obtain flour. The Olive seed has concentrated nutritional benefits including high levels of plant protein a, fiber and antioxidant polyphenols.

[Link to respective examples in the Sidestream Value Tool \(please register to have a full view\)](#)

[PROTEOLIMAR](#)

B) Low-medium added value

Tanning agent for leather

From olive leaves a natural tanning agent can be obtained. This can offer a healthier and cheaper alternative to chemical tanning processes. The extraction process is an easy mechanism similar to brewing tea. Another benefit is that the leather manufacturing waste products can be returned to the value chain

[Link to respective examples in the Sidestream Value Tool \(please register to have a full view\):](#)

[WET GREEN](#)

C) Lowest added value

Biogas

You can use produce biogas for heat and electricity at the end of the cascade saving e.g. electricity/heating costs or even sell electricity to the grid and make some additional income.

[Link to respective examples in the Sidestream Value Tool \(please register to have a full view\):](#)

[IDENER](#)

[Universidad de Jaén](#)



Sidestream of the month - January 2018: Olive leaves, olive stones and seeds

Bringing added value to agriculture and forest sectors by closing the research and innovation divide



Contact:

AGRIFORVALOR

Steinbeis 2i GmbH

Kienestr. 35

70619 Stuttgart / Germany

www.steinbeis-europa.de

www.agriforvalor.eu



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