

Sidestream of the month

November 2017

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

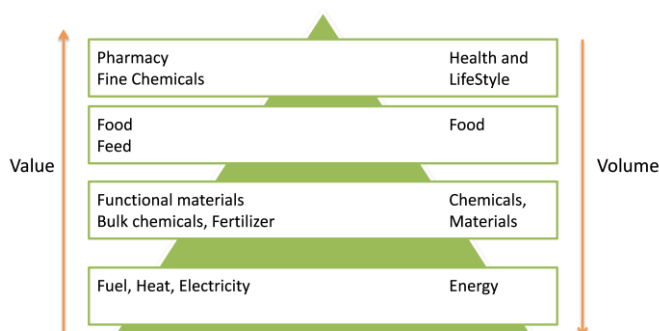
“Grape skin, grape seeds and grape leaves”



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 696394.

Grape skin, grape seeds and grape leaves

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

Bioactive compounds can be extracted like polyphenols which are famous natural compounds with antioxidant effect e.g. for food supplements and cosmetics. Extraction technologies are proven and well established.

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

[Innovaoleo](#)

[Bioactive Net](#)

B) Low-medium added value

Bio fertilizer

Bio fertilizer can be produced from the digestate of the biogas process or gained after specific biomass treatments. This can substitute conventional chemical fertilizing options and save costs. There are proven methodologies to produce bio fertilizers.

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

[Entoconvert](#)

[Ardec](#)

C) Lowest added value

Heat/electricity

You can use produce 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 \(please register to have a full view\):](#)

[Anaerobic Digestion](#)

[Thermochemical Treatment](#)



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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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