

Sidestream of the month

December 2017

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

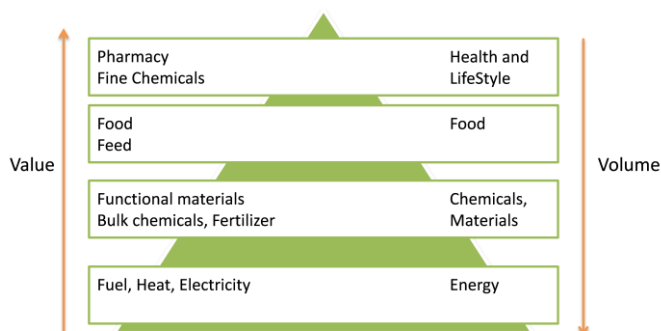
“Grass”



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Grass

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

Animal feed

Through mechanical separation process, a protein rich green juice can be obtained as well as press cake. Both can be used as protein rich and GMO free animal feed for pigs and cattle and substitute imported soy meal.

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

[GRASSA BV](#)

B) Low-medium added value

Bioplastics

Processes are available, well established and chosen as best practice that yields cellulose fibres of high purity. These dried grass fibres can be used as filler for PP, PE, or even Mater Bi and can be added to the matrix thermoplastics (AgriPlast). These compounds can be injection moulded or extruded to a variety of products. The fibres can also be used for insulation in the construction area.

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

[BIOWERT](#)

Cosmetics

Specially developed ultrafiltration and Reverse osmosis process can be used for isolating grass from slurry. As result important base material for the production of flavours and cosmetic products can be obtained.

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

[BIOWERT Reverse Osmosis](#)



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 \(please register to have a full view\):](#)

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