



←BioSuck←



OPTIMIZED WASTE MANAGEMENT AND BIOENERGY PRODUCTION

ERA-NET SUSFOOD: BIOSUCK

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The project BioSuck aims at establishing a decision support system (DSS) that brings about a redesign of the food processing industry with regard to an optimized waste collection system. This will work via vacuum lines and subsequent processing of concentrated waste into bioenergy or recycling of nutrients.

The redesign will save a significant quantity of water because it requires considerably less water for cleaning purposes when waste is sucked off. This will accordingly decrease the disposed wastewater and thus reduce costs. The concentrated waste (high organic load fraction) can further be used for a self supply with nutrients (fertilizer, food or feeding purposes) and/or bioenergy generated by subsequent processes (biogas, bioethanol, hydrothermal carbonization).

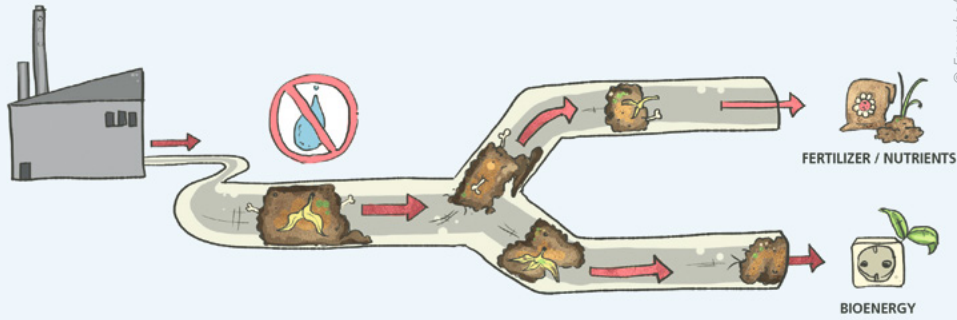
Keywords

- Vacuum based sewage system
- Decision support system
- Lab- and pilot-scale tests
- Value creation through converting residues into:
 - Biocoal
 - Biogas
 - Fertilizer/feed

Industrial Sectors

Food processing industry:

- Dairy
- Beer and beverages
- Sugar and starch
- Fruit and vegetable processing
- Meat and fish processing
- ... others possible on request



1



2

1 *BioSuck concept*

2 *Three different biocoals from food waste*

Technological specification

The project outcome will be an MS-Excel® based decision support system with a complementary guideline for the redesign of the food processing industry and for closing loops regarding energy and nutrient supply.

Detailed project outcomes:

- Database/matrix about food waste accumulation scenarios
- Database/matrix about food waste compositions
- Environmental costs and benefits assessed for prospective process variants
- Determination of advantageous bioenergy production and/or nutrient recycling routes
- Test pilot system designed and built

Our service

By contributing to BioSuck in terms of providing waste(water) samples, information about the waste(water) disposal and/or the waste(water) treatment the BioSuck team can evaluate if a vacuum system is a possible solution for your company.

Our service covers:

- Assessment of your current sewage system
- Identification of possible improvement potentials
- Execution of lab-scale experiments to evaluate the potential to upgrade your wastes into a valuable product (e.g. biocoal, biogas, ...)
- Consulting with regard to optimize your waste(water) management

Your benefit

- Save money directly through significant wastewater reduction
- Benefit from possible water savings of 50–80 %
- Upgrade your wastes and create additional benefit
- Increase the sustainability of your products
- Become more flexible with regard to your sewage system when changing your food production process
- Overcome problems with high COD load in your wastewater

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