

Germany, Darmstadt**Dr. Christian Struve***Institution*

BERNHARD JÖCKEL - Innovation zum Erfolg

Position

Innovation Consultant

Field of work

Innovation and network management with technical focus on biomass, energy technologies and energy efficiency, environmental engineering, electrical engineering and electronics, pharmaceuticals, microsystem technology, sensor technology, transportation.

Network manager of W-BAST (Technology and competence network for material from LCMW in Germany, i. a. value chain, biomass (pre-)treatment, material & thermal recycling)

Experience*About the feedstock*

The technical vision of the innovation network W-BAST is to develop individually pre-treatment techniques for (woody) loppings from roadside and landscape management activities to make the material materially and thermally "usable".

In the focus are grass cuttings and loppings from roadside maintenance, landscape management activities on public areas, private gardens which are transported to commercial/public collecting points. In the network W-BAST several 10.000 t/a are treated with a primary water content of approx. 60 %.

Within W-BAST herbaceous material from these collecting points is transported to the composting plant and is subsequently sold as compost and the woody biomass is sold as fuel to energy plants without noteworthy profits.

A technical process to produce wood chips, pellets, briquettes and WPC, within single plants is developed by the W-BAST network.

Processing chain

The biomass is transported to collection points by public, private or commercial units.

Within W-BAST the biomass is biologically dried to a water content of 40 % on-site and technically dried down to a water content of 10 %, e.g. using waste heat of biogas plants. The dried biomass is fed into a pre-treatment plant at the collection point, which produces different feedstock fractions (see the pictures at the end) .

Economics

The costs of all steps depend from the ownership of machines, transport vehicles and stores. The price is also dependent on capacity and location of these. Communities often have their own collection point and vehicle pool.

Context

Operators of commercial collection points (with public-service mission) and public collection points for loppings want to increase their financial output from selling herbaceous and woody biomass. The quality of their woody biomass is comparable with forest wood and they want to exploit the

potential. The W-BAST network was established to develop a technical process to shred and to treat loppings for the production of briquettes and wood chips. The network consists mainly of medium-sized companies from the area of collection, processing and recycling of loppings, scientific institutions and strategic partners.

Related formalities

The German Waste Management Law also applies for material from landscape management. Loppings is declared as waste and waste is not saleable and transportable without permission. Because of the status of waste they have difficulties in selling their products. For example, to sell briquettes authorities in each federal state of Germany have to agree.

Wider insight

People want sustainability and resource efficiency and they contribute e.g. by bringing their garden waste to the collecting points and they prefer to buy briquettes made by “their” own material. This could be a big Unique Selling Proposition (sales advantage).

Messages

The energetic use of material from landscape management could be supported by the German government, e.g. by establishing standards, to get rid of the waste status. That would also strongly minimize the need for imports of wood for the energetic use, because biomass cogeneration plants in Germany are increasing and the demand for biomass is growing.

Contact information

c.struve@bernhardjoeckel.com

Interlink

[W-BAST](#)

Visual materials

