maxbiogas

The new biogas resources - straw, wood or leaves -

for biogas plants

New substrates and their effective use in biogas plants

- Landscape conservation
- Plant residues
- Area harvest optimization

Complete conversion of cellulose and hemicellulose of all plant material, including plant residues

The new biogas resources – straw, wood and leaves

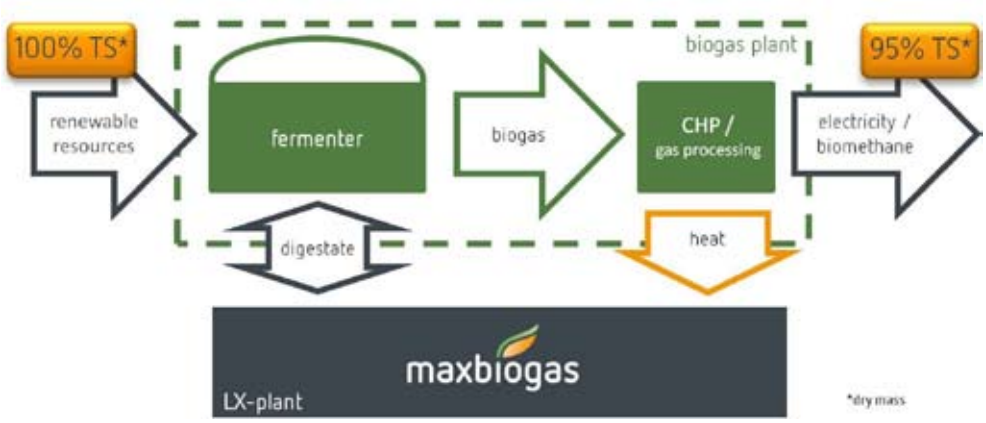
Biogas made from grass, straw, wood and leaves – this is currently only possible for very young grass and a degree of degradation of only slightly above 50% is currently achievable. On the other hand, wood and leaves are classified as not fermentable. Maxbiogas technology allows for a near complete fermentation of plant material. A comparison of biogas yields with (bp + LX-plant) und without (bp) maxbiogas technology is shown in the following tables.

Substrates for the bp	bp Nm^3/t oTS	bp+LX-plant Nm^3/t oTS
Crop straw	250 - 370	~ 690
Leaves	0 - 300	~ 700
Forrest wood residues	0	~ 600

Substrates for the bp	bp Nm^3/t oTS	bp+LX-plant Nm^3/t oTS
Maize (whole plant)	570 - 600	~ 880
Land conserva-tion grass	130	~ 650
Nawaro digestate	0	700

Technology

Maxbiogas technology is based on known processes from the paper industry. In this processes lignin is separated from cellulose. The main innovation of the maxbiogas process is based on the adaptation to the general thermal conditions of biogas plants as well as the recovery of the hemicelluloses. Processes which originally needed 150 bar and 200°C are now realised at 70°C and at normal pressure. This means, that in the maxbiogas process no additional thermal energy is required beside the waste heat from power generation or from gas purification.



The easiest application is the pre-treatment of biogas digestate. The solid parts of the digestate are mainly composed of cellulose und hemicelluloses which were not available for biogas production. The maxbiogas LX-plant pre-treats the digestate in such a way that it is transformed almost completely into biogas in the biogas plant fermenter. The energy used by the maxbiogas process is supplied by the power generation or by the gas purification of the biogas plant.

About maxbiogas

The company maxbiogas is developing sustainable technologies and plants for renewable energies and plant resourses. For more information please contact Dr. Katrin Streffer (katrin.streffer@maxbiogas.com).