jbs progas® e 2

Exploit your substrate's gas potential more efficiently

Many substrates have a high content of vegetable cellulose substances. Cellulose substances encase utilizable nutrients (so-called cage effect), thus rendering them temporarily unavailable for energy generation.

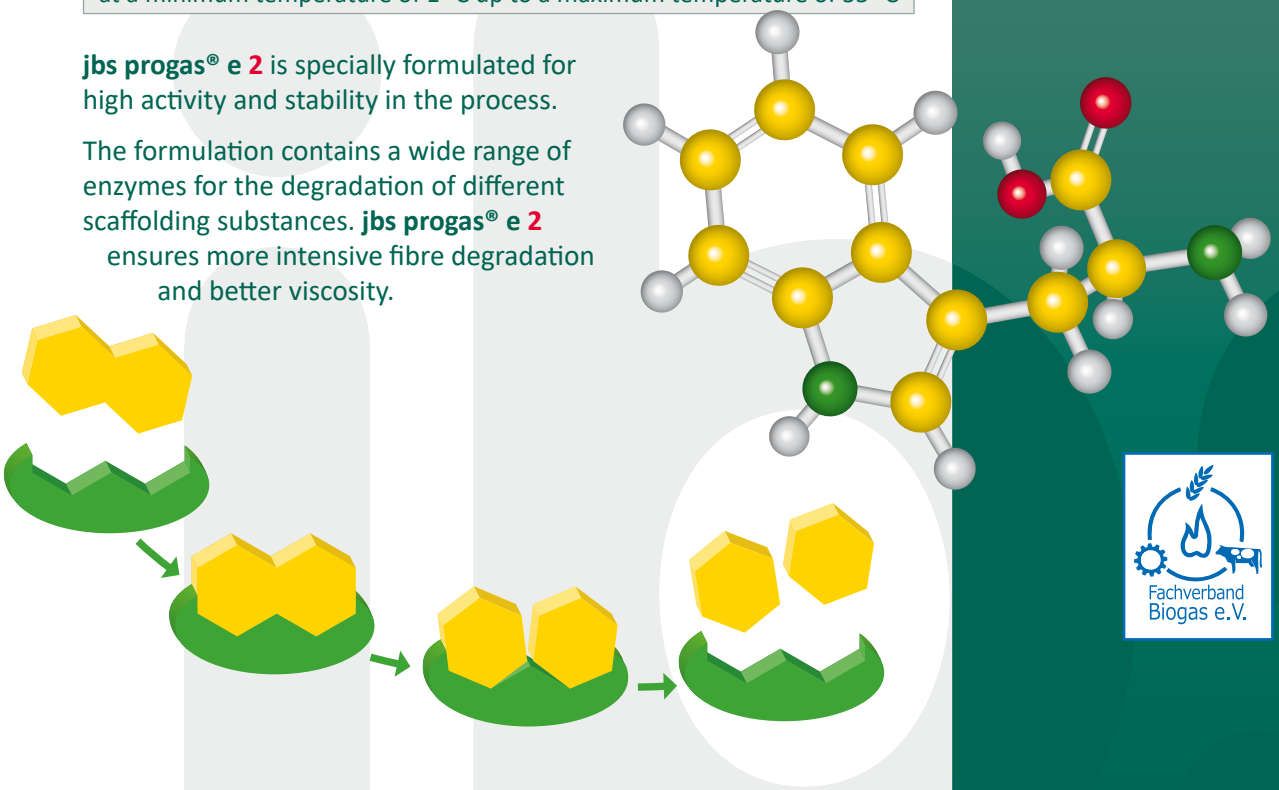
For each of the cellulose wall's components, there is a special enzyme – like cellulase for splitting up cellulose, pectinase for pectin degradation etc. The bacteria in the fermenter require time to produce their own enzymes for fibre degradation. It is, however, uncertain whether the fermenter's microbiological stock will provide a sufficient amount of all the necessary enzymes.
Selected enyzmes in our **jbs progas® e** products support the bacteria in speeding up the „breakup" of cellulose substances. Cellulose and others are split into single sugar molecules, preparing them for their further transformation from fatty acids to methane.

The daily application of enzymes intensifies the degradation of vegetable cellulose substances during the stage of hydrolysis. Cellulose substances participate in the development of swimming layers, the accumulation of solids in places the stirring unit cannot reach and the development of sinking layers. Using enzymes has positive effects on the viscosity in the fermenter. The amount of energy needed for stirring and pumping as well as the wear and tear of the technology involved is significantly reduced.

jbs progas® e 2
Application add 30 - 60 ml/tonne of solids/day (without liquid manure) to your fermenter (using the solids dispenser, for example)
Packaging 25 kg = 21.45 litres
Storage and shelf life shelf life of at least 1 year from date of manufacture if stored in a dry place at a minimum temperature of 1 °C up to a maximum temperature of 55 °C

jbs progas® e 2 is specially formulated for high activity and stability in the process.

The formulation contains a wide range of enzymes for the degradation of different scaffolding substances. **jbs progas® e 2** ensures more intensive fibre degradation and better viscosity.



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At a glance

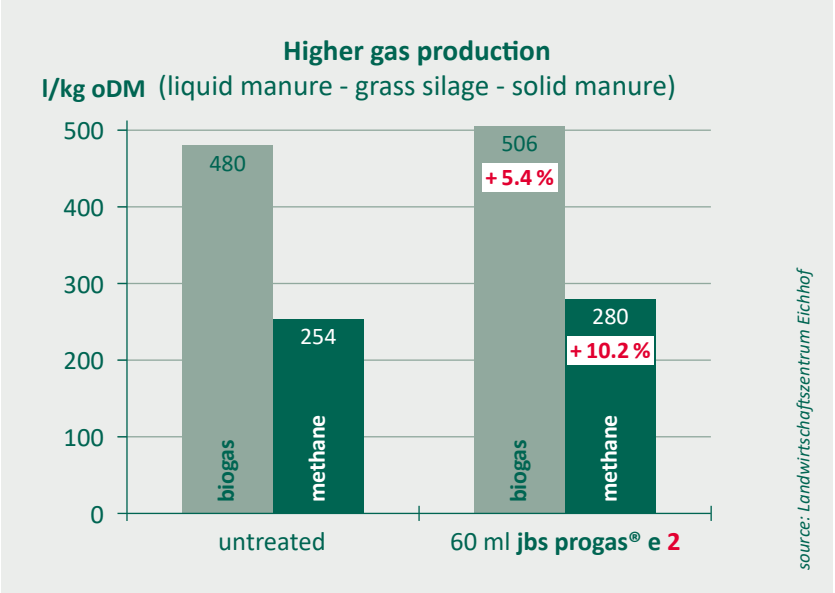
- optimizes microbiological processes
- improves substrate exploitation / saves substrate
- increases methane content and gas yield
- reduces time and efforts needed for stirring and pumping
- reduces the risk of swimming or floating layers
- the running time of agitators and pumps

Fachverband Biogas e.V.

Batch trials at the Eichhof agricultural centre

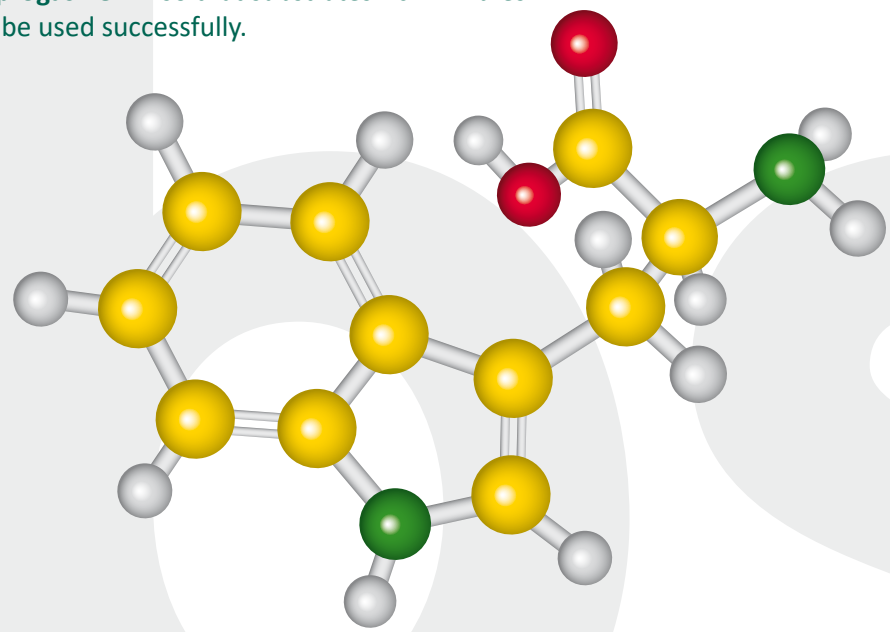
Experimental setup

The trials were carried out in 20-litre fermentation tanks. Slurry, grass silage and solid manure were mixed with inoculum from an agricultural biogas plant and fermented for 35 days at 39 ± 1 °C in accordance with the VDI 4630 regulation. During the experiment, the amount of biogas produced was quantified and its methane content determined. Furthermore, the DM and oTM contents of the substances used were determined. The proportion of cattle manure was not taken into account when measuring the amount of enzymes used.



The trial with these high-fibre, difficult-to-digest substrates showed an increase in biogas yield of 5.4 % compared to the control variant. However, the proportion of methane in the biogas increased by 10.2 %. This means that not only was more gas produced, but the production of methane was improved in a targeted manner. The substrates were better utilised. More methane from the same feedstock means higher profitability.

jbs progas® e 2 – so that substrates rich in fibres can be used successfully.



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