



Pressemitteilung

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Vechta, March 2015

Green Vegetables Gas Up WELTEC BIOPOWER Builds 500-kW Biogas Plant for Vegetable Producer

In January 2015, WELTEC BIOPOWER started building an anaerobic digestion plant in Loughgall, Northern Ireland. The customer and operator of the 500-kW plant is the vegetable producer Gilfresh Produce. The enterprise produces numerous field-grown products and processes them into food. „For WELTEC, this is the third plant in Northern Ireland and thus the eleventh in the UK“, says Kevin Monson, sales manager of WELTEC BIOPOWER UK Ltd., in Stoneleigh, Warwickshire.

Thanks to Northern Ireland's mild Gulf Stream climate, the products of Gilfresh grow well on an agricultural area of 1,000 ha. The product portfolio of the growth-oriented family enterprise includes root vegetables, salad crops and numerous cabbage varieties. The company – which was established more than 50 years ago and has almost 130 employees – also grows trend products like pak choi.

Gilfresh used to deliver the vegetable waste that accumulates in the sorting, washing and packaging processes to farmers as cattle feed. From July 2015, the waste and the vegetable washing water will be loaded into the bioreactor. To maintain an optimum stock level, an underground pre-storage tank is located before the two 2,625-m³ stainless-steel digesters; a 6,000-m³ tank is planned for gas-tight digestate storage. In addition to vegetable waste, cattle manure, chicken litter as well as whole crop, grass and maize silage will be used.

Especially in view of the different properties of the substances to be used, the investors were impressed by the WELTEC solution for uninterrupted entry of the input material: The robust **MULTIMix** system guarantees continuous utilisation and homogenisation of the substrates and stable plant operation. In combination with an 80-m³ solid matter dosing feeder, the WELTEC system ensures optimum shredding and intensive mixing of the vegetable waste and long-fibre silage. The efficient pre-processing of the substances ensures, not only biological decomposition and efficient gas yield, but also low energy consumption of the plant.

„The biogas plant will enable us to pursue our growth course on the one hand and our ecological goals on the other hand“, explains Thomas Gilpin, founder of Gilfresh. „WELTEC has designed the plant precisely for our specific production conditions. What ultimately convinced us was the fact that WELTEC was able to offer this flexible design with high-quality technologies at excellent conditions“, says Thomas. Another reason why he is pleased with the plant layout is that his company advocates the determined protection of resources.

In line with the goal to constantly improve the ecological footprint, the decision-makers decided to supply their own energy: About 40 percent of the power generated by the 500-kW CHP plant can be utilised in the company's own production process. In the near future, the efficiency will increase even more due to the upcoming expansion of the cold storage. The excess power is fed into the public grid, and the process heat is made use of for heating the company buildings and for the production processes.



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Organic energy worldwide

Such projects are necessary to enable the UK to provide 15 percent of their energy demand from renewable energy sources by 2020. Furthermore, carbon emissions are to be reduced by about three quarters by then, compared to 1990. The UK have understood that besides wind and solar energy, another renewable source needs to be established in order to ensure reliable supply, and have subsidised bioenergy by means of measures such as attractive feed-in tariffs for regional power. „If other entrepreneurs follow the example of Gilfresh Produce, the United Kingdom will be able to reach the defined climate goals“, says Kevin Monson.

Picture/Caption



To maintain an optimum stock level, an underground pre-storage tank is located before the two 2,625-m³ stainless-steel digesters.

[Next Page: Company Portrait](#)



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Company Portrait

In 2015, biogas pioneer WELTEC BIOPOWER GmbH celebrated its 14th anniversary. To date, the company has planned and established more than 300 plants. Based on the modern approach of experienced engineers and the expertise of its 80 employees, the company from Vechta, Lower Saxony, offers complete biogas plants from one source and has developed into one of the world's leading providers of biogas plants.

In view of the corroding impact of the hydrogen sulphide and ammonia compounds contained in biogas on un-protected parts, WELTEC builds the fermenters from stainless steel, thereby ensuring a long useful life of the plant. Additionally, the manufacturing depth guarantees a consistently high standard regardless of the location and ensures an export rate that is far above the industry average.

The plants have a modular structure. WELTEC BIOPOWER uses only tried-and-tested system components and develops most of the technologies along the entire value chain internally: fermenter technology, mixing technology, control technology, hygienisation systems and digestate processing solutions have been developed in the company.

With its comprehensive services, WELTEC makes sure that its biogas plants are technically and economically stable. The CHP service guarantees stable output, the biological supervision continually monitors relevant parameters, and systematic repowering makes sure that the biogas plant is always up to date. Operators can choose from a range of different service packages.

One of the main strengths of the medium-sized enterprise is its ability to deliver individual and flexible solutions – from compact plants to large computer-controlled plants in the megawatt range, waste recycling plants and biogas parks with gas processing technology.

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