BIOBETA SEDIMENT CHECK:

DIRECT EXPERIENCE ON THE PLANTS

SOC. AGR. BORGOLUCE · LOC. SUSEGANA (TV)

999KW

In the hills of Conegliano - Valdobbiadene, within the 1,200 ha of the estate of the Counts of Collalto, the modern biogas plant of **Soc. Agr. Borgoluce** transforms into renewable energy the by-products of the zootechnical activity (sewage and buffalo dung), the ensiled cereals of the second crop and other by-products of local agri-food activities.

Dr. **Lodovico Giustiniani**, the company administrator, successfully leads this production activity in total respect for the environment, considering eco-sustainability as a real asset to deliver to future generations a better place in which to live.

In operation since 2010, the **IES Biogas** technology plant is connected to the stable by 400 buffaloes and consists of 2 primary digesters, 1 secondary digester and 1 indoor storage tank that are fed daily with about 40 tons of silage and other by-products vegetables in addition to 20 tons of manure.

"Conscious of the fact that the fermentative volume available to the bacterial flora, plays a fundamental role in the biogas yield of incoming biomass, explains the agricultural director p.a. **Gabriele Furlanetto,** and worried that after approx. 7 years of operation the deposit of inorganic material on the bottom of the digester had reached an important level, we decided to invest a few tens of thousands of euros for emptying and cleaning operation.

Come to know the original monitoring and analysis system developed by Bietifin we immediately took advantage of the novelty and we lent ourselves, not without some initial fear, to the direct instrumental verification by the specialized technicians of the company to discover with relief that the tanks were still sufficiently clean and that the planned emptying intervention could be postponed for a few more years.

In addition to the significant cost savings achieved thanks to the lack of emptying of the digesters, I would also like to underline that the inspection was carried out with great professionalism in compliance with safety standards, without any loss of production and was very useful to optimize our mixing methodology and reduce the electrical self-consumption of the plant".

BIOBETA SEDIMENT CHECK:

DIRECT EXPERIENCE ON THE PLANTS

MARCHESI GINORI LISCI SOC. AGR. · LOC. MONTECATINI VAL DI CECINA (PI)

700KW

Around the Ginori Castle of Querceto, a village of medieval origin that dominates the Cecina Valley from Volterra to the sea, there are 2,000 hectares of the estate of the Marquis Ginori Lisci, known throughout the world for its precious porcelains, and which today they are dealing with traditional agricultural activities with high quality wine-growing and olive-growing productions and an appreciated tourist reception activity.

Luigi Malenchini, managing director, in 2007 after a study trip to Germany, decided to undertake a development project with high environmental value that will lead in May 2010 to the construction of a 700kW biogas plant for the transformation into electricity of farm products and by-products.

The UTS technology plant consists of a primary fermenter (Ø24m x h6m) and a secondary fermenter (Ø32m x h6m) and produces about 6 million kWh / year of electricity that half serve the needs of the company's production activities and of the medieval village and for the other half are placed on the national network.

After a period of initial experimentation, today the plant is fed for over a third with the by-products of olive processing, thus transforming into renewable energy what has always been, especially in a region with an olive vocation like Tuscany, had represented, both economic and environmental level, an important cost.

"Having used about 4,000 tons / year of olive pomace, explains the agricultural director **Massimo Piccini,** the probability that part of the olive kernel had settled on the bottom of the fermenters was quite high.

Thanks to the Bietifin Sediment Check technology we have been able to ascertain that in the primary fermenter the deposit was a few centimeters while in the secondary fermenter it was now approaching over 1.5 m in height so as to compromise the heat exchanger's ability to keep the tank at ideal temperature for the functionality of bacterial flora.

With the advice received during the inspection we have undertaken some corrective actions on the management of mixing and postponed the need for emptying during the interventions of major engine maintenance or other extraordinary maintenance of the plant taking the opportunity to restore the original fermentative volume without further economic losses".