

CASE STUDY #2

Milking Parlor & Cowshed 30m³/d Wastewater Treatment Full-Scale Plant



Location	Israel
Built	Nov 2017 [§]
Type	Dairy farm
Cows	260 heads
Flow	30 m ³ /d (~8000 gal/d).
DM	4-5 %
Electricity	1 st stage no additives: 40 kW 2 nd stage with additives: 100 kW
Footprint	400 m ² (~120 Ft ²)
Technology	AD-BNR

[§] The plant is in its testing stage.

Intending full operation in March 2018

Sustainable Green Technologies (SGTech) is a multi-disciplinary R&D CleanTech & Renewable Energy company, specializing in Nutrient Recovery, Biogas solutions and Water Recycling for Livestock. SGTech developed a game-changing **chemical-free** economical feasible waste treatment producing treated water at quality for discharge into the sewage.

After successful 2m³/d (~530 gal/d) dairy farm prototype (CASE STUDY #1), the technology is being tested for a full-scale plant. We scale-up the technology for treating the entire waste of small scale dairy farm (~300 heads). The purpose of this CASE STUDY is dual; 1) proving the technology robustness in a “real” waste treatment. 2) Verifying the economical profitability of the technology.

This CASE STUDY intend to examine not only the Nutrient recovery, i.e. the treated water quality, but also the Biogas/Energy (electricity & heat) production, and the compost quality. The technology will be tested in 2 stages: with 1) no additives, 2) added additives, e.g. chicken dung or whey up to 15%. Table 1 summarizes the system goals.

TABLE 1: System Goals

Parameter	Units	Influent	Effluent	Sewage discharge levels [§]
COD	mg/L	~45,000	@ March 2018	< 2,000
TSS	mg/L	~45,000	@ March 2018	< 1,000
TKN	mg/L	~600	@ March 2018	< 100
TP	mg/L	~400	@ March 2018	< 30
Ammonia	mg/L	~500	@ March 2018	-
pH	-	~6	@ March 2018	6-10

March 2018						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

[§]According to the Israeli regulations

Thursday, Mar 1st 2018