Supplementary Tables

Supplementary Table S1: Variation of production of biogas between Co-digestion, mono-digestion and overall (both Co-digestion and mono-digestion) digestion

Co-digestion					
Source	DF	SS	MS	F	*P value*
Factor	2	391860	195930	1.29	< 0.310
Error	12	1816990	151416		
Total	14	2208850			
Mono-digestion					
Source	DF	SS	MS	F	*P value*
Factor	5	120737	24147	0.43	< 0.824
Error	24	1351338	56306		
Total	29	1472075			
Overall					
Source	DF	SS	MS	F	*P value*
Factor	8	1819661	227458	2.58	< 0.024
Error	36	3168328	88009		
Total	44	4987989			

Supplementary Table S2: Pair sample t-test of biogas production between different co-digestions

	t value	***P* value**	**95 % CI**
WH:FW (1:1) vs WH:FW (2:1)	5.78	< 0.004	(205.8, 586.0)
WH:FW (1:1) vs WH:Fw (1:2)	4.22	< 0.013	(68.5, 332.1)
WH:FW (2:1) vs WH:Fw (1:2)	6.59	< 0.003	(113.2, 278.0)

Supplementary Table S3 The kinetics parameters of the fitted model

Sample	***Kinetic Parameters***						***Lag Phase***
	Y (Nml)	Ym	K *Per Day*	XC	R^2	X^2	
WH:FW (1:1)	1655	1683.83845 ± 26.05011	0.22342 ± 0.01755	6.50313 ± 0.22388	0.99776	1063.17	2.02
WH:FW (2:1)	1140	1154.76267 ± 13.83657	0.25914 ± 0.01852	6.24938 ± 0.1698	0.99843	360.59	2.39
WH: FW (1:2)	1400	1422.3567 ± 34.12585	0.2055 ± 0.02335	6.05209 ± 0.36129	0.99465	1726.44	1.18
CD:WH (1:1)	925	937.97972 ± 5.45379	0.23361 ± 0.00621	7.83696 ± 0.08119	0.99971	45.912	3.55
CD:WH (2:1)	905	903.48674 ± 5.33056	0.32005 ± 0.00991	7.61918 ± 0.08105	0.99961	63.399	4.49
CD:WH (1:2)	850	846.86297 ± 20.54432	0.27297 ± 0.04335	7.41776 ± 0.43069	0.99096	1031.08	3.75
CD:FW (1:1)	945	949.97415 ± 10.48438	0.2478 ± 0.01651	5.51697 ± 0.17121	0.99856	212.60	1.48
CD:FW (2:1)	950	943.54683 ± 11.85825	0.35533 ± 0.0434	3.88015 ± 0.29589	0.99698	429.25	1.06
CD:FW (1:2)	970	971.16244 ± 3.23365	0.33437 ± 0.01145	4.78414 ± 0.06224	0.99983	26.09	1.79

Supplementary Table S4: Analysis of overall variation of reduction of Chemical Oxygen Demand

Source	DF	SS	MS	F	*P value*
Factor	6	244822046	40803674	63.35	< 0.001
Error	63	40579746	644123		
Total	69	285401792			