



Reference

- TS: Total Solids
- oTS: organic Total Solids (volatile solids)
- N: Nitrogen
- NH4: Nitrate
- P: Phosphorus
- CH4: Methane
- FM: Fresh Material

Substrates	nominal Biogas Output				nominal Energy	CH4	
	[m ³ /t oTS]	[m ³ /t FM]	ft ³ /1k-lb FM		BTU/gal FM	[% by Vol]	
Stabilizing Substrates (necessary)		to					
Bovine Manure (lactating, dry, heifer & beef)	200 - 500	20	34	388	660	1,550	58%
Swine Manure	300 - 700	20	35	388	680	1,737	65%
Co-Substrates							
Bovine pack manure	210-300	40	50	777	971		60%
Swine pack manure	270-450	55	65	1,068	1,262		60%
Horse pack manure		56	209	1,087	4,058		59%
Poultry Litter	250 - 450	70	90	1,359	1,747		60%
Renewable Primary Influent(s)							
corn silage	450 - 700	170	200	3,301	3,883		55%
rye silage	550 - 680	170	220	3,301	4,271		55%
sugar beets	800 - 860	170	180	3,301	3,495		54%
beet leaf	550 - 600	70	70	1,359	1,359		55%
grass silage	550 - 600	170	200	3,301	3,883		55%
Exogenous Substrates							
Agricultural							
brewers grains (wet)	580 - 750	105	130	2,039	2,524		60%
cereal distillers wash	430 - 700	30	50	582	971		63%
potato distillers wash	400 - 700	36	42	699	815		63%
fruit distillers was	300 - 650	10	20	194	388		63%
potato pulp fresh	650 - 750	80	90	1,553	1,747		59%
potato pulp water (starch)	1500 - 2000	50	56	971	1,087		55%
potato process water	3000 - 4500	55	65	1,068	1,262		55%
sugar press pulp (waste)	250 - 350	60	75	1,165	1,456		72%
sugar molasses	360 - 490	290	340	5,630	6,601		72%
apple pomace	660 - 680	145	150	2,815	2,912		68%
fruit pomace	590 - 660	250	280	4,854	5,436		68%
grape pomace	640 - 690	250	270	4,854	5,242		68%
Organic Waste							
Restaurant/Hospital food residuals	200 - 500	50	480	971	9,319		54%
vegetable waste	400 - 600	45	110	874	2,136		62%
oil/grease from seperation process	≈ 700	11	450	214	8,737	970	66%
swine paunch manure	250 - 450	20	60	388	1,165	1,764	66%
bovine paunch manure	200 - 400	20	60	388	1,165	1,603	60%
grease trap sludge	900 - 1200	35	280	680	5,436	3,086	66%
grass clippings			103		2000		58%
leaves			19		370		58%
Other Wastes							
newspaper			50		980		60%
office paper			147		2850		60%