

Solid Waste Management

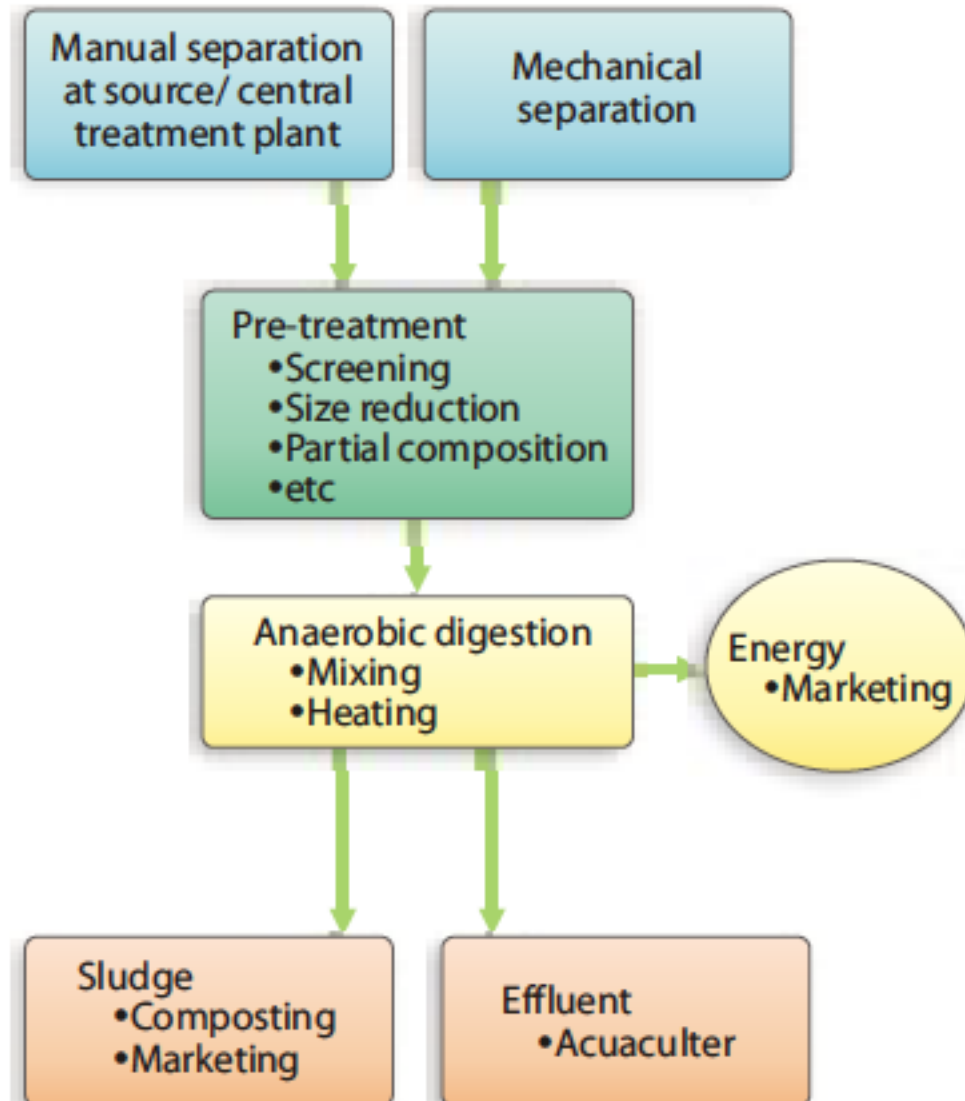
Anaerobic Digestion/Biogasification

Anaerobic Digestion

- biogasification
- biogas generation
- fermentation
- methane fermentation
- methane production

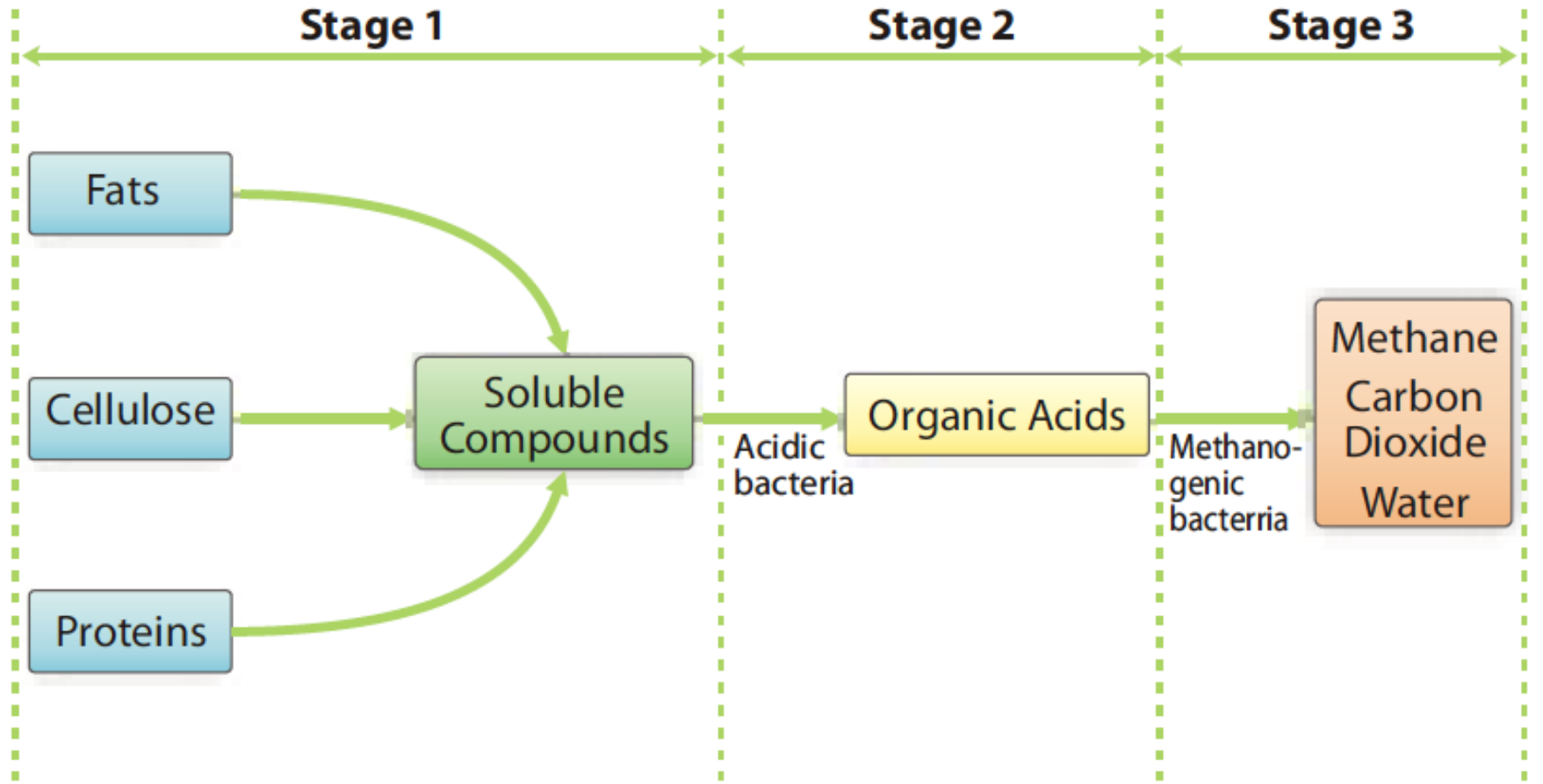
Advantages of anaerobic digestion

Typical Unit Operations and Steps in Anaerobic Digestion Process

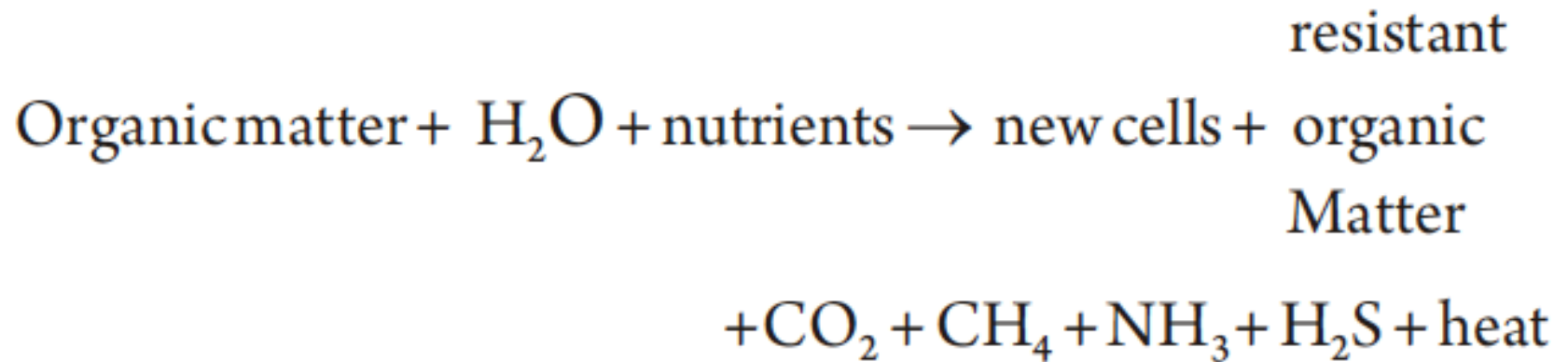


Different stages of Anaerobic Digestion

(Courtesy: US Department of Energy)



General Anaerobic Transformation



Environmental Factors affecting Anaerobic Digestion

- **pH (6.5-8)**
- **Alkalinity (1000 – 10,000 mg/L)**
- **Temperature**
- **Toxicity**
- Loading rate
- Retention time
- Nutrients
- Solid Content
- Pre-treatment
- Inoculation
- Mixing

Biogas Technology in Bangladesh

Sl	Organisation	Period	Number of plants
1	BCSIR	1973-2005	22,100
2	LGED	1985-2001	7,000
3	DoE	1979-1983	260
4	BRAC	1987-2005	300
5	DLS	1988-1994	70
6	Thengamara Mohila Sabuj Sangha (TMSS)		
7	BSCIC	1983-1988	30
8	Bangladesh Agricultural Development Corporation	1983-1984	20
9	DANIDA	1982	4
10	BAU	1971-1973	2
11	Housing and Building Research Institute	1981	2
12	Bangladesh Academy for Rural Development	1974	1
13	Bangladesh Commission for Christian Development	1978	1
14	Bangladesh Rice Research Institute	1983	1
15	Construction Partner Organization(CPO) under IDCOL		8,992
Grand total		1971-2008	38,765

Source: Renewable Energy and Environmental Information Network (REEIN), www.reein.org