

Table 1. List of Abbreviations.

EtOH	Ethanol
GHG	Greenhouse gases
N ₂ O	Nitrous Oxide
CIAT	International Centre for Tropical Agriculture
LHV	Low Heating Value
IPCC	International Panel for Climate Change
CS	Centralized cassava system without biogas production
DS	Decentralized cassava system without biogas production
CS+AD	Centralized cassava system with biogas production
DS+AD	Decentralized cassava system with biogas production
COD	Chemical Oxygen Demand
CO ₂	Carbon dioxide
CH ₄	Methane
TS	Total Solids
AD	Anaerobic Digestion
CHP	Combined Heat and Power
Bg	Bagasse
Pls	Peels
AeBio	Aerial Biomass
Vi	Vinasse Total
Vm	Vinasse from microplant
Vd	Vinasse fro the distillery
WWt	Wastewater from washing the cassava tubers
PF	Plug flow Reactor
CSTR	Continously Stirred Reactor
UASB	Upflow Anaerobic Sludge Blanket
TF	Trickling Flter
Fld	Field
Et.plt	Ethanol plant
Dch	Discharge
Dw	Dewatering
Lq.Fr	Liquid Fertilizer
Sl.A	Solid Amendment
Wr	Water for Reuse
W	Water
BEO	Brut Energy Output
NEO	Net Energy Output
E.Eff	Energy Efficiency
Alt	Alternative
NRER	Net Renewable Energy Ratio
Ebalance	Energy Balance
BEff	Biomass Energy Efficiency
WWT	Wastewater Treatment
TOC	Total Organic Carbon