

Agricultural Biogas Production Process

Livestock Manure



Liquid Receiving Station

- ✓ Proper mixing
- ✓ Sedimentation of solids



Pasteurizer

- ✓ High temperature heating
- ✓ Pasteurization of substrates



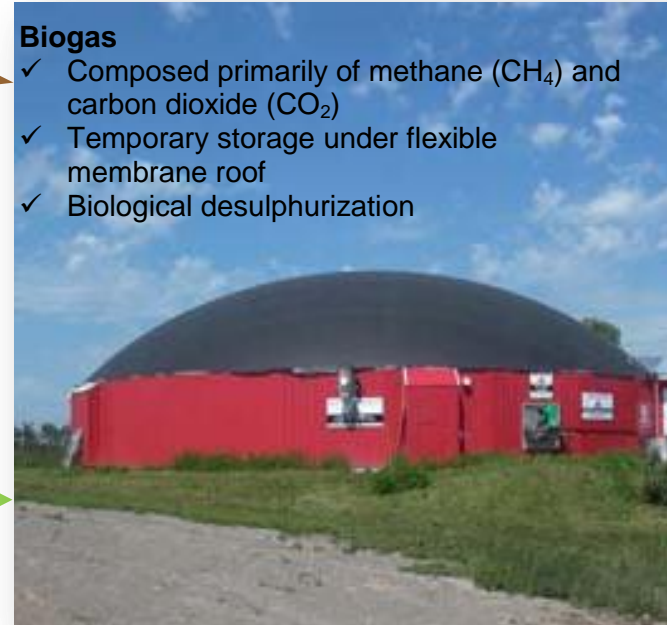
FEEDSTOCK

Anaerobic Digester

- ✓ Digestion of substrates by active microorganisms
- ✓ Mesophilic conditions (40°C)
- ✓ Continuous mixing
- ✓ Semi-continuous flow

Biogas

- ✓ Composed primarily of methane (CH₄) and carbon dioxide (CO₂)
- ✓ Temporary storage under flexible membrane roof
- ✓ Biological desulphurization



GAS

GAS

Biomethane Upgrading Unit

- ✓ Converts biogas into biomethane



Connecting to natural gas pipelines



CHP (Combined Heat and Power Unit)

- ✓ Average electrical efficiency of 38% and thermal efficiency of 36%



Connecting the CHP to the grid



Solid Receiving Station

- ✓ Preparation of material
- ✓ Sedimentation of solids
- ✓ Addition of liquid as needed



Plastic separation



Solid Separator

- ✓ Separates the solids from the liquid fraction of the digestate
- ✓ Different types (roller, screw-press)

DIGESTATE



Solids (fiber)

- ✓ Bedding



Liquid Fraction

- ✓ Organic fertilizer
- ✓ Soil improvements



Thermal Energy

- ✓ Residual heat available as process heat for auxiliary businesses

Production Overview

