Cornes and Company Limited/ Cornes Biogas.

Biogas Plants

- **Research, development and planning of biogas plants**

Features

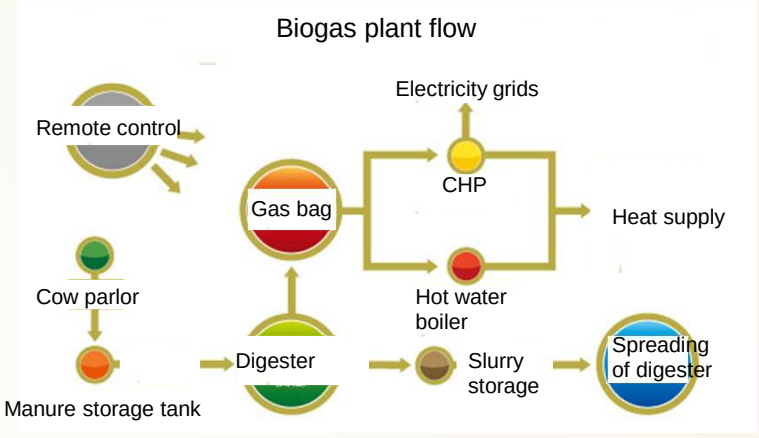
- **Processing of manure of livestock**
- **Generating biogas that can be used as energy source**
- **Production of digester effluent that can be used as liquid fertilizer**

Overview (Technical principles, actions, etc.)

Cornes Biogas System

■Simple and stable fermentation system
Adopting medium-temperature fermentation(38℃) for stable operation of plants.
Introduction of a simple system for low-cost maintenance.

■Automatic operation without full time operators
The system is equipped with various sensors to monitor processing.
Feeding monitored information back into the system makes stable fermentation possible.



Installation Examples

• Shikaoi municipal biogas plant, Hokkaido.
Fermentation method : Medium-temperature anaerobic fermentation
Substrate : Cow manure 85.8t/day, Hay 4.0t/day, Sewage 5.0t/day, total 94.8t/day
Fermentation tank : 400m3 x 4, 800m3 x 2
Use of gas : CHPs (100kw, 200kw),hot water boiler and steam boiler

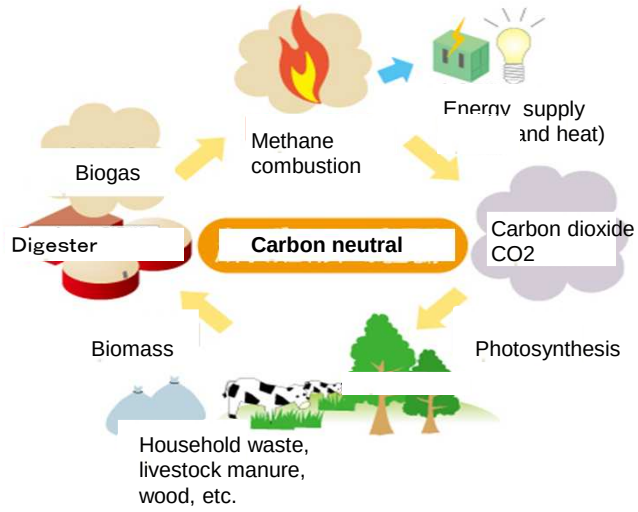
・Delivery feed center Nayoro, Hokkaido.
Fermentation method : Medium-temperature anaerobic fermentation
Substrate : Cow manure 40.3t/day
Fermentation tank : 1,246m3
Use of gas : Gas boiler (100,000 kcal/h) x 3

・Nour company limited, Hokkaido.
Fermentation method : Medium-temperature anaerobic fermentation
Substrate : Shochu (Distilled liquor) wastes (potatoes, wheat) 5t/day
Fermentation tank : 200m3
Use of gas : Gas boiler (80,000 kcal/h) x 2

The total number of biogas plants delivered is 26.(As of September 2011)

Effects

• Reduction in cost of fuel and electricity by transferring biomass such as cow manure into energy source
• Sale of electricity generated from biogas in accordance with the Renewable Energy Law.
• Contribution to global environment protection through going carbon neutral
• Contribution to regional environment protection through solving problems such as offensive odor of cow manure
• Realization of recycle-oriented and efficient dairy farming through making use of digester effluent as quality organic fertilizer.



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