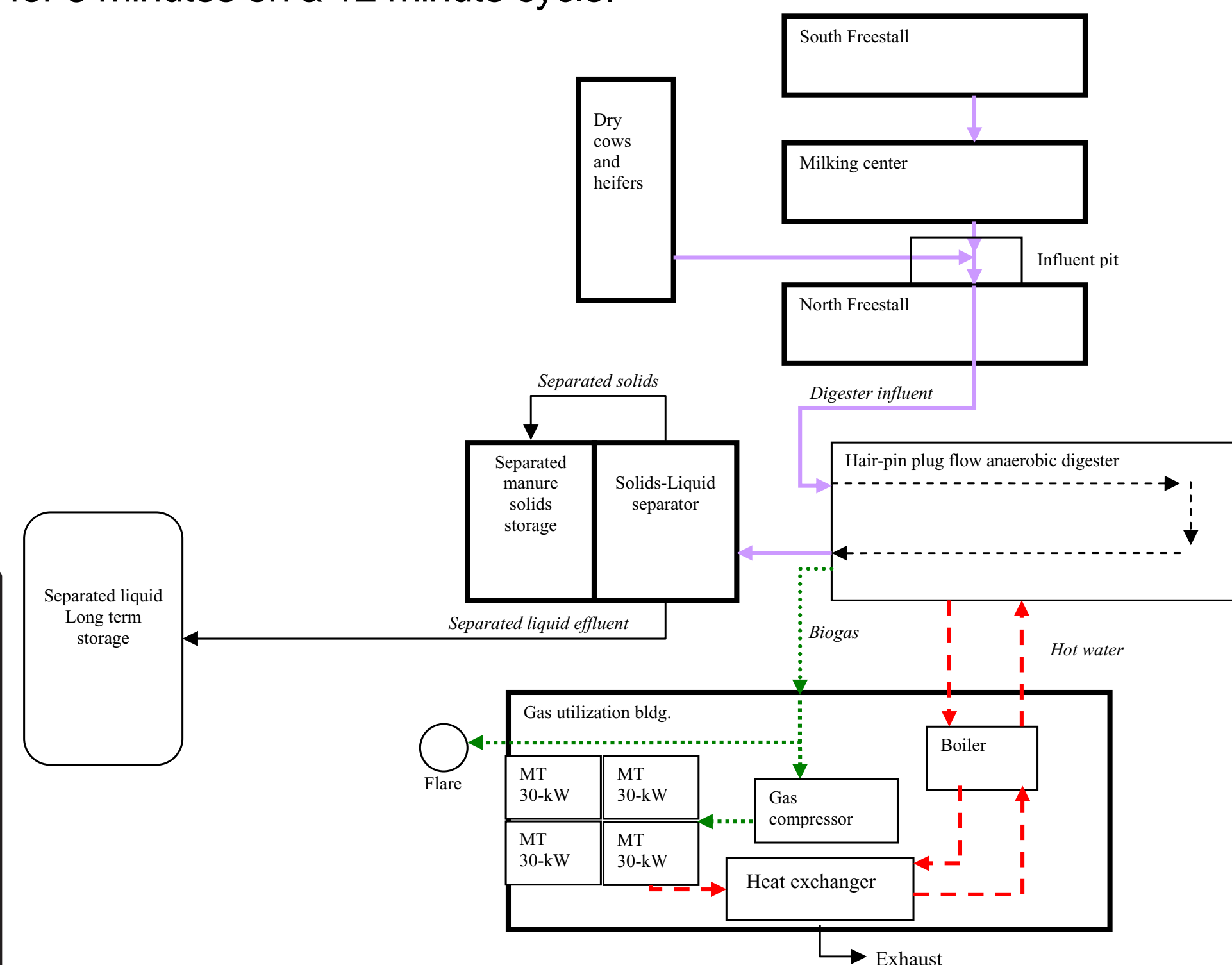


Process Description

Digester influent is pumped from a centralized collection pit to the digester for 3 minutes on a 12 minute cycle.



Hard top digester covered by greenhouse structure



Shell and tube heat exchanger

"This is the most frustrating project we've ever had on the farm."

- Dirk Young, 2004

"The digester system is now working well and overall was worth the frustration. It is the right thing to be doing."

- Dirk Young, 2008

Benefits and Considerations

Benefits

- Odor control
- Potential revenue from:
 - 1) Value-added products
 - 2) Reduction of purchased energy
 - 3) Sales of excess energy
 - 4) Efficient use of biogas production
 - 5) Carbon credit sales
- Conversion of nutrients from organic to inorganic form, allowing them to be readily utilized by plants as a natural fertilizer, if effluent is spread at an appropriate time
- Pathogen reduction

Considerations

- Possible high initial capital and/or high operating costs
- Long and tedious contracts with the local utility; may require special equipment for interconnection
- Dedicated management of the digestion system is required
- Careful attention to equipment maintenance and safety issues due to the characteristics of raw biogas

For more information

Download and print the Patterson Farms Case Study at:

<http://www.manuremanagement.cornell.edu/HTMLs/CaseStudies.htm>

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