Cotton Ginning Research

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METHANE FROM GIN AND DAIRY WASTES

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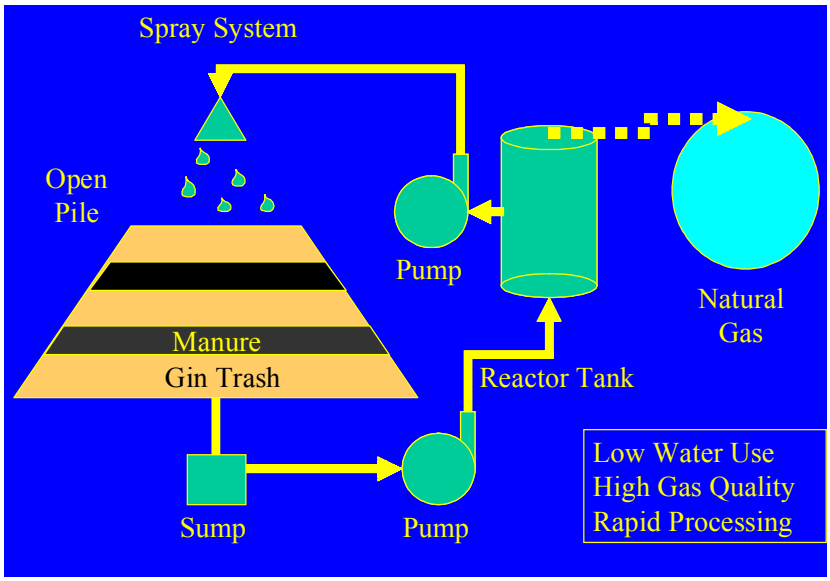
Cotton ginning involves removal of both seeds and foreign matter from cotton lint. While the market for cotton seed is well established, other byproducts are not always utilized to their full potential. Combining gin and dairy wastes in a two-phase anaerobic system produces methane gas and a class A soil amendment.

A pilot plant study combined gin trash and dairy manure screening flushed from a milk parlor. The study indicated process completion in three weeks is possible with temperatures above 32 C (90 F), mixture ratios above 5:1 (gin to dairy waste, dry basis) and twice daily wetting of the solid phase. Ten percent of the mass was converted to soluble chemical oxygen demand, which potentially can be converted to methane in the second phase, at from 70 to 80% concentration. Fecal coliform and salmonella bacteria counts fell even though temperatures were below the pasteurization level.



Research will continue to develop economically productive alternative to gin trash disposal and developing alternative energy sources.

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