

ANAEROBIC DIGESTION

SMALLER DIGESTER THAT RETAINS MICROBES GIVES A SHORTER RETENTION TIME

J.J. Farber Farm, East Jewett, Greene County



Propane (start-up) and Biogas (main) boilers to maintain digester at 100°F.

ECONOMIC ANALYSIS

	Items	Costs/Benefits
Capital Costs	Digester	\$59,000
	Solids and Liquids Separation	\$48,000
	Liquid Storage (existing)	\$160,000
	Others	\$27,000
	Total Capital Cost	\$294,000
Annual Operating Costs	Maintenance, Repairs, Labor, Fuel, Insurance, Reporting, Spreading Costs, etc,	\$24,000
Annual Benefits Including	Bedding material replacement, fertilizer savings, bedding savings, field usage	\$13,000
Annual Cost per Cow (\$/cow/year)		\$400

Note: Absent costs of spreading and the liquid storage, the system actually has an annual cost of \$260 per cow.

The economic analysis includes manure-spreading costs, which would be required with or without the digester system. The cost of the system also includes a \$160,000 long-term concrete liquid storage. The capital costs would be reduced if this were an earthen storage. The New York City Watershed Agricultural Council feels the costs are justified to achieve phosphorus removal from the solids, pathogen reduction, odor control and access to fields where manure previously could not be spread.



Solids are composted or placed in a field with a dump wagon.



Composted solids.

