

Waybright digester sparks energy meeting

BY JOYCE BUYP
Staff Correspondent

YORK — While mainland China has some 700,000 small anaerobic waste digesters, and the Indian government is building 450,000 across that Asian country, U.S. agriculture still views the production of biogas from livestock manure with skepticism. 'We're way behind, and it's unfortunate, considering the economic pinch, that we're not taking advantage of this potential to save money,' asserts Adams

County dairyman Richard Waybright.

Waybright, of Mason-Dixon farms at Gettysburg, was a featured speaker at a seminar on saving energy on the farm, held Monday evening at the York 4-H Center. Co-sponsors for the seminar, attended by about two dozen interested farmers and area residents, were the York County Conservation District and the Region VI Pennsylvania Energy Center.

One of the principal partners in

the family-owned Mason Dixon dairying operation, Waybright is well known for his innovative and successful development of a self-sufficient electricity-from-manure digester system.

Using the manure waste from the 1,200-dairy animals in the milking string, Mason-Dixon has wiped out their annual \$35,000 electricity bill, and is at the point where they could theoretically begin marketing some of the current back to area utilities at peak times.

Mason-Dixon made national farm-news headlines two years ago when the initial system went on-line. Now, with that period of experience as a foundation, the biogas production is continually being fine tuned, and has shown considerable gain in efficiency.

Manure from the huge free-stall barn is flushed twice daily with a flow of 3,000 gallons of water per minute, for about four minutes in each alleyway. A one-half-inch slope drains the manure-bearing liquid away fairly rapidly, leaving behind clean alleys, and drier, healthier feet on the dairy animals, as a bonus.

From the alleyways, the flushed manure-water is diverted to a large settling basin outside the barn. After solids settle out a six-inch depth of sludge daily, the liquid is drawn off the top, and the sludge scraped into a holding area for feeding into the biogas digester.

This past winter, Waybright added a second giant-plastic-bag digester, each capable of holding up to 15,000 cubic feet of gas. The manure sludge is heated in the digester using waste heat from the self-contained system.

A PVC piping system draws the

gas from the digester bag and feeds it into the generators, where it is converted into electricity.

One recent change was a switch

from diesel motor generators to Caterpillar LP-operable ones, the same type of generator used in the

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Richard Waybright, of Mason-Dixon Farms in Gettysburg, says American agriculture is way behind much of the rest of the world in recognizing the value of energy from livestock manure.



A special meter, shown here by Met-Ed's residential representative Paul Wojciechowski, makes it possible for residential customers to plan their energy usage at a time of day when the rates are extra low.

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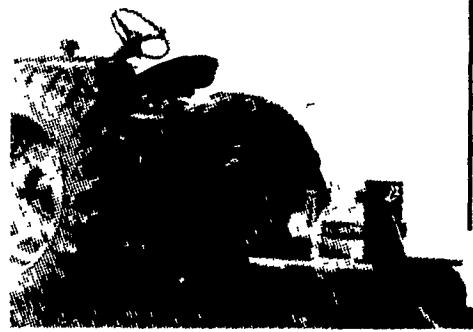
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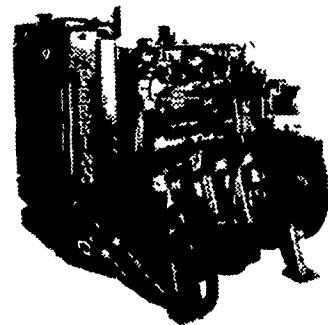
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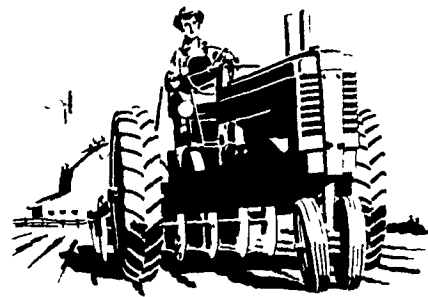
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