

Revitalization of the Jamaican dairy sector. III biogas as an option for enhancing international competitiveness

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The heavy reliance of the local dairy sector on imported inputs has exposed its vulnerability to the spiraling costs of key inputs into milk production and has contributed to increasing competitive disadvantage relative to world leading producers. Average variable cost of production in 2008, put Jamaican milk at a comparative disadvantage of 47 and 103 percent respectively, compared to the US and New Zealand. Consequently, operating margins have rendered primary production increasingly unsustainable.

This paper examines the impact of the four key inputs (Concentrate Feeds, Fertilizer, Labour and Electricity) on the state of competitiveness of milk production in Jamaica. It reviews earlier recommended strategies for the first three and analyses the potential contribution of on-farm generation of electricity from Biogas, as an option for improving operating and financial efficiencies.

The data from eight farms sampled, indicated a significant linear relationship between daily grid-supplied electricity consumption and herd size; the individual cow within the herd, requiring 0.66 kWh per day.

The financial viability of adoption of biogas generated electricity on farm models of herd sizes between 60 and 1200 cows was evaluated against the traditional use of grid supplied electricity.

The analysis provides economic and financial justification for the promotion of electricity generation from Biogas for which dairy farms are particularly endowed given the huge disparity between generation capacity and requirement on-farm. Additionally, from an environmental perspective, the established negative impact of livestock on climate-change, adds justification to a national strategy of biogas generated electricity on dairy farms.

Palabras Claves/Key Words: biogas, Jamaica