



Tropentag, September 17-19, 2018, Ghent

“Global food security and food safety:
The role of universities”

Assessing the Costs and Benefits of Implementing a Quality Based Milk Payment System in Kenya

OGHAIKI ASAAH NDAMBI¹, RUTH NJIRU², CAMEE VAN KNIPPENBERG³, JAN VAN DER LEE¹,
CATHERINE KILELU⁴, MARGARET NGIGI²

¹Wageningen University and Research, Dept. of Animal Sciences, The Netherlands

²Egerton University, Agricultural Ecoeconomics and Agribusiness Management, Kenya

³Wageningen University and Research, Dept. of Social Sciences, The Netherlands

⁴African Center for Technology Studies, Kenya

Abstract

Assuring the quality and safety of milk and dairy products has been a persistent problem in the Kenyan dairy sector, caught between limited consumer awareness on quality & safety, processors and traders competing for milk volumes but neglecting quality, poor milk handling practices along the chain, and lack of enforcement of quality & safety regulations. A quality based milk payment system (QBMPS) targeting smallholder dairy farmers was piloted by processor Happy Cow Ltd, aiming to control and improve milk quality and safety along the dairy chain. In order to assess the practicability of a QBMPS in Kenya and to determine pre-conditions for its upscaling, both private and public sector costs & benefits of the system were estimated. Data was collected from key stakeholders targeting costs and benefits of farmers, CBEs (Collection and Bulking Enterprises), the processor and the public.

Our findings show that in cash terms, the farmer is the greatest beneficiary from a well-functioning QBMPS, with a net profit of about 2 KES kg⁻¹ milk if he produces Grade A milk for the QBMPS. By participating in the QBMPS, farmers also benefit from social inclusion, chain integration and productivity gains. The CBE and processor have a net additional cost (difference between costs and benefits) totalling 2.5 KES kg⁻¹ milk, mainly driven by the significant initial costs for laboratory equipment, additional staffing and training of farmers. Regarding public health, we estimate an occurrent annual loss of 53,000 healthy life years (disability adjusted life years) in Kenya due to milk related infectious diseases. With a modest commitment of farmers and chain actors, the QBMPS can generate health benefits of about 10 KES kg⁻¹ milk as avoided health costs from milk related illnesses. These enormous public health benefits could be used as a justification for public and donor investments to support the QBMPS, especially to temporarily compensate the CBEs and processors who currently make a loss from the system. Additionally, we recommend private players to improve their commitment and the government to promote the growth of the formal sector and strictly enforce milk quality standards in order to increase the benefits for farmers and consumers.

Keywords: Food safety, milk quality, public health, quality based milk payment

Contact Address: Oghaiki Asaah Ndambi, Wageningen University and Research, Dept. of Animal Sciences, Droevendaalsesteeg 1, 6780 PB Wageningen, The Netherlands, e-mail: asaah.ndambi@wur.nl