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“Development on the margin”

## Performance of Smallholder Dairy Farming in Nakuru County, Kenya

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### Abstract

The Kenya dairy sub-sector has been undergoing developments since the 1980s in the areas of adoption of intensive dairy farming especially zero grazing. There have been concerted efforts by the government and other development partners to commercialise the sub-sector so as to make it more profitable to farmers, especially smallholder farmers, but the profitability in the sector continues to be variable with some smallholder farmers making losses. The causes of the varying profits have not been empirically established with the influence of institutional arrangements and financial factors contributing to this inconsistency not fully established. The study dwelt on establishing the critical institutional arrangements and financial factors that constrain the profitability of small-holder dairy farmers in Nakuru County. A multi-stage sampling procedure was used to select respondents. Data was collected by structured interviews at the farm level. Data Envelopment Analysis (DEA) was used to come up with profit efficiency rankings among the farmers, and the Frontier Model was used to establish the factors that constrain profit efficiency. The mean efficiency according to the results was 86 %. The farm and farmer characteristics that were significant in explaining profitability efficiency according to the frontier results were: feeding system, breed type, and gender. The financial characteristics included debt amount and debt asset ratio. Additionally, issues of trust were also found to have an effect on profitability, and they included trust on local buyer price, trust on institutional buyer unit of measure, and trust on middlemen unit of measurement.

**Keywords:** Dairy, Kenya, livestock, smallholder farmers