Effects of fodder conservation and ration formulation interventions on dairy performance in Kenya

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ABSTRACT

Use of conserved forages and proper ration formulation has great potential to bridge the gap in dairy nutrition and reduce seasonal variations in milk yield. This study determined the effects of various fodder and ration formulation interventions on dairy farm performance in North Rift, Eastern, and Central regions of Kenya. Seventy-two farms were purposively selected as participating farms and assigned into six groups of twelve as follows: two groups on silage production, two groups on ration formulation, and two control groups having similar production systems and in the same geographical locations as the other groups. Data on daily dry matter feed intake and milk yield were recorded while laboratory analysis was done to determine milk butterfat and protein content. The data was analyzed using a multi-linear regression model to assess the relationship between independent and dependent variables. The results showed that farmers using feed rationing with advisory services had the highest average daily milk yield (19.7 kg/cow) compared to maize train silage (16.8 kg/cow) and those with silage support from Service Provider Enterprises (SPE) (13.3 kg/cow) ($P<0.05$). Daily dry matter feed intake/cow varied significantly across the interventions as well as feed utilization efficiency ($P<0.05$). Milk butterfat and milk protein content did not differ ($P>0.05$) across the interventions. In conclusion, use of maize train silage and feed rationing with advisory services increased milk yield and reduced seasonal milk fluctuation.

Keywords: Feed intake, Maize silage, Milk yield, Silage bales, Service provider enterprises.