21. Efficacy of silage preparation methods adopted by livestock farmers in Tigania West Meru County.

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Abstract

Silage production is an important method of fodder preservation which provides a vital source of nutrition for animals especially during periods of feed scarcity. Fresh fodder crop is chopped, pressed and preserved through anaerobic fermentation, thus providing a quality silage that can be used to feed livestock for up to three years. However, the risk of significant silage losses mainly from aerobic spoilage at feed out can be high, especially if the farmers' ensiling process did not factor in strategies for minimizing these losses. The aim of the current study was to assess sources of livestock feed used by farmers in Tigania west sub-County in Meru County with focus on silage preparation methods and their efficacy in minimizing losses due to aerobic degradation. A total of one hundred and eighteen livestock farmers were selected using systematic random sampling where every 5th farm was selected and the owner interviewed using structured questionnaires. The results showed that silage making was adopted by 10.17 (12/118) % of the farmers in Tigania west sub-County with the majority of the farmers, 89.2% relying on natural pastures (grazing), fresh fodders or combinations of both. The farmers who had adopted silage making were preserving an average of 4383.3 (range: 1000-8000) kg of silage using bunker silos, tower silos or polythene tubes. Only 16.7 (2/12) of the farmers had implemented strategies to minimize aerobic degradation of silage during feed out. As a result, an average of 22.2% of the silage was lost to aerobic degradation and therefore not available for feeding cattle. In conclusion, the findings of this study show that the ongoing efforts to promote sustainable agriculture in the region needs to address training of farmers on appropriate methods of feed preservation and utilization to minimize losses.

Keywords: *Livestock, silage, feed preservation, aerobic degradation, Tigania west Meru*