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Enhancing Small-Scale Sheep Production in Ethiopia Using Local Feed Resources

Haileselassie Ghebremariam Araya[1], Yayneshet Tesfay[2], Oliver Wasonga[1]

[1] *University of Nairobi, Land Resources Management and Agricultural Technology (LARMAT), Kenya*
[2] *Consultant, Ethiopia*

Abstract

There is a growing demand for sheep meat in Ethiopia, due to the cultural preference, increasing population, urbanisation and income. This calls for commercialisation of otherwise predominantly subsistence sheep production to meet the rising market demand and enhance income of the producers. Fattening sheep is one of the key strategies of adding value to the lean animals to meet specifications of the available markets while fetching better prices for the farmers. However, feed shortage is a major barrier. Therefore, there is need to find local feed resources that are affordable to small scale farmers. This study evaluated the impact of three browses namely; *Cordia monoica*, *Cordia uncinulata* and *Dichrostachys cinerea*, on the production performance of sheep fattening. Barley-straw was used as the control diet. One year old abergelle breed sheep weighing 14.1 ± 0.72 kg were fed on feed rations of barley-straw supllemented with 200g of each of *C. monoica*, *C. uncinulata* and *D. cinerea* for a period of 15 weeks. Mean separation test analysis shows that the daily intake of total dry matter of the sheep fed with supplemented diet (8.73g) and those fed on control diet (4.9g) were significantly different ($p < 0.001$). Dry matter digestibility for the *C. uncinulata* and *D. cinerea* supplemented diet was significantly higher ($p < 0.0001$) than the diets supplemented with *C. monoica* and the control diet. Similarly, the *C. uncinulata* and *D. cinerea* supplemented diet had significantly higher ($p < 0.0001$) apparent crude protein digestibility than the *C. monoica* diet and control diet. The sheep fed with *C. uncinulata* and *D. cinerea* had the highest mean slaughter weight, empty body weight and hot carcass weight. A partial budget analysis shows that every dollar spent on *C. uncinulata*, *D. cinerea* and *C. monoica* supplementation gave a return of USD 4.00, 3.28 and 0.53, respectively. Supplementation of sheep feed with *C. monoica*, *C. uncinulata*, and *D. cinerea* not only improves weight gain, but is also cost effective in enhancing productivity of small scale sheep production in response to the rising mutton market demand in Ethiopia. If browse production, processing and use are technically and institutionally supported, there is a potential for enhancing sustainable and market-oriented small-scale sheep production in Ethiopia.

Keywords: Browses, Ethiopia, market, sheep

Contact Address: Haileselassie Ghebremariam Araya, University of Nairobi, Land Resources Management and Agricultural Technology (LARMAT), Nairobi, Kenya, e-mail: hailish746990@gmail.com