CHEMICAL COMPOSITION AND UTILISATION OF CROP RESIDUES, AGRO-INDUSTRIAL BYPRODUCTS AND POULTRY WASTES USED AS SUPPLEMENTS TO GRAZING CATTLE

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ABSTRACT
A research project was conducted to: (1) determine the chemical composition of some selected non-conventional feed resources produced in Swaziland and (2) compare the feeding value of these feed resources through on-farm feeding trials. Three on-farm feeding experiments were conducted in Thulwane and Luyengo areas. Results of feed analysis show that crop residues are very low in protein and high in fibre. Agro-industrial byproducts and poultry manure on the other hand are high in protein and low in fibre. In experiment 1, animals fed cotton seed cake supplement (T2) showed significantly (p<0.01) higher live-weight gains than those fed maize stover or sugar cane tops, which were similar in their effects. In experiment 2, the effect of substituting poultry manure with cotton seed cake was highly significant (P<0.01). Feed conversion ratio reduced as the level of cotton seed cake increased in the diet, indicating improved feed efficiency. In experiment 3, the effects of the commercial ration (CR) and the experimental ration (F1) on live-weight change were similar, but both rations were significantly (P<0.01) better than the unsupplemented control in this respect. From these studies, it can be concluded that non-conventional feed resources available in Swaziland can be used economically to support moderate live-weight gains on poor veld pastures all year round. The authors strongly recommend that the results of these studies form the basis for formulating livestock feeding policies and strategies that ensure self-reliance and sustainability of ruminant livestock production in the country.

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