

Growth performance, carcass characteristics and meat sensory evaluation of West African dwarf sheep fed varying levels of maize and cassava hay

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Abstract A study was conducted to determine the growth performance and meat yield and quality of West African dwarf sheep. Twenty rams weighing an average of 15.3 ± 0.79 kg live weight and with an average age of 18 months were allotted at random to five dietary treatments of 0%, 25%, 50%, 75% and 100% maize hay (MH) for a period of 105 days. Dry matter (DM) intake and growth rate of the rams were improved as the level of cassava hay (CH) increased in the diets. Live weight gain varied significantly ($P < 0.05$) across the treatments, ranging from 38.8 to 47.9 g/day. The carcass weight of the rams fed 100% MH was significantly ($P < 0.05$) lower compared with the other treatments. Dressing percentage ranged from 56.5% to 61.0% with no significant ($P > 0.05$) difference observed across the treatments, while the distribution of the slaughtered parts was similar ($P > 0.05$) regardless of the dietary treatment. Proximate composition of the meat from the loin indicated that the DM, crude protein, fat and ash contents were not influenced ($P > 0.05$) by the dietary treatments. Panellists rated the meat to be similar ($P > 0.05$) in flavour, juiciness, tenderness and overall acceptability while colour and texture varied significantly ($P < 0.05$) across the treatments. In conclusion, this study indicated that better growth performance and meat production in West African dwarf sheep can be improved in form of body weight and carcass production when fed 25%MH and 75% CH diet.

Keywords Dwarf sheep · Growth · Hay · Carcass characteristics

Abbreviations

CH	Cassava hay
CW	Carcass weight
EBW	Empty body weight
DM	Dry matter
DP	Dressing percentage
FCR	Feed conversion ratio
GIT	Gastro-intestinal tract
g	Gramme
g/d	Gramme per day
HCW	Hot carcass weight
MH	Maize hay
kg	Kilogramme
SW	Slaughter weight
WAD	West African dwarf

Introduction

The West African dwarf (WAD) sheep are found predominantly in the southern part of Nigeria. Pagot (1992) described it as being characterised by small size. Mature