

The Grasscutter: An untapped resource of Africa's grasslands

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Introduction

The grasscutter (or Greater cane rat – *Thryonomys swinderianus*) is a common rodent in Africa, south of the Sahara. Its distribution ranges from The Gambia to southern Sudan, across the continent down to south Namibia and South Africa (Fritzinger 1995). The grasscutter grows to >0.5 m in length and weighs ~8 kg. It has characteristic rounded ears, a short nose, coarse bristly hair, and forefeet smaller than its hind feet. Grasscutters are herbivores and their natural diet is mainly grasses and cane, but they also eat bark, fallen fruits, nuts and many different kinds of cultivated crops. Grasscutters get their name from the way they cut the grasses and other foods with their incisors, producing a chattering sound that is relatively loud and very distinguishable (Mills 1997).

The meat is highly preferred by a wide range of West Africans and is gaining some acceptance in Central and Southern Africa (Van Zyl *et al.* 1999a, Adu *et al.* 2005). The meat commands a premium price compared to other meat sources, with its sale being a major industry in both urban and rural centres (Adu *et al.* 2005). Grasscutter farming is therefore being promoted in most countries in West Africa as a model for poverty reduction (Baptist and Mensah 1986). Though various aspects of captive grasscutter production have been studied, it has a low uptake rate as a new farming venture (Anang *et al.* 211). This paper therefore attempts to create a broader and clearer picture of the potential of grasscutter farming in parts of Africa where the animal occurs.

Method

The production parameters and carcass traits were based on relevant literature cited, while the economic returns were mostly based on work done at the CSIR-Animal Research Institute.

Discussion

Apart from its preferred organoleptic properties, the cholesterol level (mg/100 g) of grasscutter meat is lowest (48.5 – 53.4) compared to rabbit meat (135), beef (58.9 – 68.6) and chicken (76) (Bohac *et al.* 1988, Van Zyl *et al.* 1999a). The net return on one breeding female grasscutter (US\$ 192.01) is also comparable to one sow (US\$ 192.80) and 36% superior to the return on one cow (US\$ 52.85) (Table 1).

With a low metabolic fecal nitrogen estimate of 3.5 N/kg dry matter intake (Adu *et al.* 2012) and a comparatively high dry matter digestibility coefficient of 72.5% (Van Zyl *et al.* 1999b) the grasscutter demonstrates a high ability to thrive on poor quality forage, permitting its production by the less privileged in society. There is however paucity of information on its nutritional physiology, application of artificial reproductive technologies, as well as health requirements to help improve productivity under captive breeding.

Conclusion

To better exploit the grasscutter for meat production genetic improvement with the view to developing a more docile grasscutter, use of artificial reproductive technologies as being done for various conventional livestock species as well as understanding the health constraints of the grasscutter under captive breeding, will go a long way in improving the low uptake of grasscutter farming in Africa.

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Table 1: Productivity and economic return on the grasscutter compared to other livestock species

Species	Productivity per breeding female per year	Cost of keeping breeding female (\$US) ^a	Net return per breeding female (\$US) ^a
Cow	1	140.70	52.85
Sheep	1.24	10.55	3.27
Rabbit	29	2.85	184.25
Grasscutter	6	1.54	192.01
Pig	8.1	67.54	192.80
Chicken	50	3.51	9.78

^a1 \$US = GH¢ 1.99

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