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Towards a Paradigm Shift in Livestock Production in Africa: Using the Potential of Neglected Animal Species

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Abstract

Population growth and changing consumption patterns have resulted in an increasing demand for animal protein, especially in sub-Saharan Africa (SSA). In meeting this demand, the production of conventional livestock species, namely cattle, sheep, goats, pigs and poultry, has been intensified. However, negative environmental, nutritional, gender-related and economic trade-offs associated with this increased production have made it expedient to explore the potentials of some neglected livestock species. Compared to neglected or “orphan” crops, neglected livestock species have not attracted much research attention, so far. To address this knowledge gap, this paper presents a systematic literature review of five neglected species: grasscutter (*Thryonomys swinderianus*), guinea fowl (*Numida meleagris*), guinea pig (*Cavia porcellus*), rabbit (*Oryctolagus cuniculus*) and donkey (*Equus asinus*), which could play a larger role in SSA. The review aimed to: (i) assess the sustainable production of these species in SSA; (ii) identify drivers and barriers to increasing the production of these species; and (iii) identify policy solutions for an increased and sustainable utilisation of these species. Applying the checklist for “Preferred Reporting Items for Systematic Review and Meta-Analysis” (PRISMA) and using Boolean search operators in academic search engines, 128 studies were selected for this review. The results show that the drivers for promoting neglected livestock species include their nutritional importance, high economic gross returns, environmental sustainability, and importance for women’s empowerment. However, considerable barriers such as feed and nutrition problems, diseases and pests, exclusion from policies and development strategies, lack of research and extension, inadequate markets and animal welfare issues were identified. This study derives five policy recommendations: increased efforts to recognise and integrate the role of neglected livestock species in national livestock policies, dedicated research and development towards genetic improvement, awareness creation, increased marketing, and technology application which if implemented could enhance the sustainable adoption of, and benefits from these neglected livestock species. We conclude that, compared to conventional livestock species, these neglected livestock have fewer trade-offs and a high and unexploited economic and nutritional potential which if given attention could yield more benefits.

Keywords: Neglected livestock, nutrition, sub-Saharan Africa