Tropentag, September 10-12, 2025, hybrid conference

"Reconcile land system changes
with planetary health"

Neglected livestock species production in southwestern Nigeria: alternatives for sustainable land and ecosystem management?

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Abstract

Rapid population and urbanisation growth in Nigeria have caused significant constraints for conventional livestock production systems. However, there are livestock species traditionally used and yet neglected. Could those species be a solution to alterations in land use patterns? This study compared production practices of conventional livestock, such as turkey/duck, local chicken, and goat, with neglected livestock alternatives, such as grasscutter, rabbit, and guinea fowl. Both systems were compared in terms of: (i) resource-use efficiency and (ii) benefit-cost ratio of production systems practised. Employing a quantitative survey, data was collected from 183 randomly selected livestock farmers across two purposively selected states in the southwestern region of Nigeria. Data was analysed using STATA, Microsoft Excel, and cost-return analysis.

Our findings reveal that 39 % of the respondents (72 farmers) kept neglected species only, 27 % kept only conventional livestock species, while 34 % kept both categories. Results also show that as an adaptive response and strategy to land use changes, 43.7 % and 36.6 % of the respondents raised the different livestock species under intensive and semi-intensive systems of production, respectively. These farmers also utilise cages and confined spaces that require less land space, with neglected livestock fitting better into these systems. Findings further show that this system of production is gaining popularity due to limited land availability and increasing demand resulting from expensive land acquisition. Private purchase as a mode of land acquisition was reported by 61.7 % of respondents. The cost-benefit ratio showed a higher (2.81) and better economic return per unit of investment for neglected livestock production than for conventional species (2.41).

Neglected livestock production in rapidly urbanising contexts compared to conventional species production has demonstrated greater resource efficiency and higher returns, creating economic opportunities, especially for disadvantaged groups. They can serve as an adaptation strategy and pathway for more sustainable livestock production, reconciling land use pressures with local food security needs. However, supportive policies and frameworks are needed to leverage neglected livestock systems and align local agricultural practices with global sustainability and planetary health objectives. In conclusion, neglected livestock species could facilitate a transformative shift in Nigeria's agricultural landscape, provided an appropriate policy framework.

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Keywords: Animal husbandry, benefit-cost ratio, neglected livestock species, peri-urban areas, productivity, resource-use efficiency, southwest Nigeria