

ASSESSMENT OF SMALL RUMINANT PRODUCTION AND MANGE TREATMENT IN THE FIVE LOCAL GOVERNMENT AREAS OF OGBOMOSO, OYO STATE

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ABSTRACT

This study examined the socio-demographic characteristics, feed resource utilization, management systems and mange prevalence of small ruminant production across five Local Government Areas (LGAs) in Oyo State, Nigeria. Structured questionnaires were administered to livestock keepers, and data were analysed using descriptive statistics and inferential tests. Results revealed notable variation in age structure, gender participation, income levels, and species composition. Youth (<40 years) predominated in Ogbomoso South (26.9%) and Oriire (20.0%), while older farmers (41–50 years) were more common in Ogo-Oluwa (46.7%) and Surulere (58.6%). Women were the majority in Oriire (73.3%), Ogo-Oluwa (80.0%), and Surulere (75.9%). Income distribution ranged from subsistence-level earnings (<₦60,000/year) in Surulere (75.9%) to more commercially oriented systems (>₦100,000/year) in Ogbomoso North (66.7%) and Ogo-Oluwa (60.0%). Feed resource diversity varied significantly, with higher use of concentrates and industrial by-products in Ogo-Oluwa and Surulere. Management systems ranged from extensive (Surulere, 86.2%) to intensive (Ogo-Oluwa, 100%), with significant differences ($P < 0.05$). Mange prevalence was highest in Oriire (100%), with low adoption of neem extract for control. Recommendations include promoting semi-intensive management, targeted feed supplementation, and herbal-based disease control to enhance sustainability and farmer livelihoods.

Key words: Small ruminants, production, mange, Ogbomoso.

Description of Problem

Nigeria continues to face a critical shortfall in animal protein supply, prompting government policies that encourage private sector investment in poultry, swine, small ruminants, and micro-livestock production (1). Although poultry is highly profitable, goats and sheep are gaining attention for their adaptability, low input demands, and potential to improve rural livelihoods (2). However, small ruminant production is constrained by factors such as diseases infestation (like mange), limited availability of quality breeding stock and inadequate feeds, which result in considerable economic losses (3). Despite their economic and nutritional importance, small ruminants are often undervalued relative to cattle due to insufficient data on herd composition, management systems, and productivity indicators (4).

Addressing these gaps is essential for designing targeted interventions to improve flock productivity and profitability. This study therefore examines the socio-economic

characteristics, management practices, herd composition, feeding systems, prevalence and treatment of mange, and economic viability of small ruminant enterprises in five Local Government Areas (LGAs) of Ogbomoso, Oyo State, Nigeria.

Materials and Methods

Study Area: The study area is Ogbomoso town, the second largest city in Oyo State, south western Nigeria with five Local government areas -Ogbomoso North, Ogbomoso South, Surulere, Ogo-Oluwa, and Oriire namely. It is a Yoruba settlement and a hub for agriculture.

Sampling Procedure: Six wards were randomly selected from the 10 wards in each of the local government areas (30 wards). Hundred ruminant farmers were randomly selected from each of the six wards, making the sample size to be 3000.

Data Collection: The instruments for data collection are observations and formal survey with the farmers. Primary data was collected by administration of both open and close ended

structured pre-tested questionnaires administered on the sampled farmers in the study area. The questionnaires centered on five main issues mainly; socio-economic profile, type of small ruminant; feed and feeding management, herd inventory and mange disease (frequency of occurrence and treatment methods).

Data Analysis: Data were analyzed using descriptive statistics such as percentage, range, frequency distribution and means of SAS version 9.0.

Results and Discussion

The socio-economic characteristics and herd type of small ruminant holders at the five Local Government Areas of Ogbomoso, Oyo state

The socio-economic characteristics of small ruminant keepers across the five Local Government Areas (LGAs) showed significant variation in age distribution, gender participation, income levels, and livestock species composition (Table 1). In Ogbomoso South (26.9%) and Oriire (20.0%), most respondents were below 40 years, indicating active youth engagement in small ruminant production. Conversely, the 41–50-year age group predominated in Ogo-Oluwa (46.7%) and Surulere (58.6%), while the older category (61–70 years) was prominent in Ogbomoso South (26.9%) and Ogbomoso North (26.7%).

This demographic pattern suggests that small ruminant farming's low labour demands and flexible management appeal to a wide range of age groups. Gender participation patterns revealed female dominance in Oriire (73.3%), Ogo-Oluwa (80.0%), and Surulere (75.9%), confirming earlier findings that women are critical actors in small ruminant production, often managing livestock for household subsistence and supplemental income (5). By contrast, male dominance in Ogbomoso North (66.7%) reflects socio-cultural norms influencing livestock ownership and decision-making which is usually done by men. Annual income distribution indicated pronounced disparities; in Surulere, 75.9% of respondents earned below ₦60,000 annually, indicative of subsistence-oriented systems, whereas Ogbomoso North (66.7%) and Ogo-Oluwa (60.0%) had the highest proportion of keepers earning above ₦100,000, suggesting greater market integration, larger herd sizes, or a more commercial production orientation. Goats were the dominant species across most LGAs (66.7–73.1%), consistent with their adaptability, lower feed requirements, and resilience under smallholder conditions (6).

Feeds and management; herd health and management; meat type and preference by small ruminant holders at the five Local Government Areas of Ogbomoso, Oyo state.

Table 1: Socio- economic characteristics of respondents and herd type of small ruminant holders at the five Local Government Areas of Ogbomoso, Oyo state

Parameter (%)		Ogbomoso South LG	Ogbomoso North LG	Oriire LG	Ogo-Oluwa LG	Surulere LG
Age	Less than 40 years	26.90	13.30	20.00	13.30	10.30
	41-50	23.10	33.40	40.00	46.70	58.60
	51-60	23.10	26.70	20.00	33.30	24.10
	61-70	26.90	26.70	20.00	6.70	6.90
Sex	Male	46.20	66.70	26.70	20.00	24.10
	Female	53.80	33.30	73.30	80.00	75.90
Annual Income (#)	Less than 60, 000	53.80	6.70	60.00	6.70	75.90
	61 000-100 000	34.60	20.00	26.70	33.30	6.90
	100 000 and above	11.50	66.70	13.30	60.00	17.20
Type of Small Ruminant	Goat	73.10	66.70	66.70	0	58.60
	Sheep	23.10	13.30	13.30	0	20.70
	Goat and sheep	3.80	20.00	20.00	100.00	20.70

Source: Field Survey, 2022

Significant variations were observed in feeding practices and management systems across the five Local Government Areas (LGAs) ($P < 0.05$) (Table 2). In Surulere (51.7%) and Ogo-Oluwa (53.3%), diverse feed combinations were predominantly used. In contrast, Ogbomoso South (38.5%) relied primarily on kitchen waste, forages, and crop residues, while Oriire (29.0%) commonly incorporated crop residue. These findings are consistent with (7), who noted that feed resource diversity is influenced by ecological conditions, seasonal availability, and market access. LGAs with a higher inclusion of concentrates likely provide diets with superior crude protein and metabolizable energy, which are crucial for enhanced growth and reproductive performance (7). Management systems also differed markedly. Extensive systems dominated in Surulere (86.2%) and Ogbomoso North (53.4%), reflecting low capital investment and

dependence on natural grazing, a common pattern in rural West African goat production (7). Conversely, intensive systems were most prevalent in Ogo-Oluwa (100.0%) and Ogbomoso South (88.5%), providing better feed control and disease prevention but requiring substantial financial inputs (8). Semi-intensive systems were rarely reported, though they are often recommended for balancing productivity and cost-efficiency (7).

Mange prevalence was highest in Oriire (100%) and lowest in Ogo-Oluwa (26.7%). The high incidence in Oriire may be linked to poor hygiene and limited veterinary access (9). Awareness and adoption of neem extract for mange control were low, particularly in Surulere (0%), despite its proven efficacy as a natural acaricide (10). This highlights a potential limitation in extension service delivery (11).

Table 2: Feeds and management; herd health and management; meat type and preference by small ruminant holders at the five Local Government Areas of Ogbomoso, Oyo state

Parameter (%)		Ogbomoso South LG	Ogbomoso North LG	Oriire LG	Ogo-Oluwa LG	Surulere LG
Type of Feed	Kitchen waste, forages, concentrates, industrial by-products, browse and crop residue	7.70	6.70	6.70	53.30	51.70
	Kitchen waste, forages and crop residue	38.50	13.30	13.30	6.70	37.90
	Kitchen waste, forages, crop residue and forages and crop residue	7.70	6.70	29.00	33.30	3.40
	Kitchen waste	15.40	13.30	6.70	6.70	3.40
	Kitchen waste, forages, concentrates, industrial by-products and browse	7.70	6.70	6.70		
	No response	19.20	6.70	13.30		
Management System	Extensive	3.80		0		
	Semi Intensive	11.50	53.40	6.70	0	86.20
	Intensive	0	6.70	6.70	0	13.80
Mange challenge	Yes	88.50	40.00		100.00	
	No	26.90	73.30	100.00	26.70	65.50
	No response	61.50	0	0	57.80	34.50
	No idea	11.50	26.70		8.90	
Neem Extract Awareness to treat	No	0	0		6.70	
	Yes	26.90	80.00	66.7	26.70	100.00
Mange	No response	3.80	20.00	33.3	57.80	
		69.20	0	0	0	0

Source: Field Survey, 2022

Conclusion and Application

Small ruminant production in Ogbomoso is dominated by middle-aged farmers raising goats. Significant differences exist in management systems, income levels, feed diversity, and awareness of diseases like mange, which is highly prevalent in some areas. These findings highlight the need for tailored interventions, such as improved extension services, promoting semi-intensive farming and educating farmers on low-cost disease treatments, to improve productivity and livelihoods.

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