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Production Capacity Utilisation, Institutional Constraints, and Evidence Gaps in Grasscutter Farming at IRVAG-Moata, Guinea

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ABSTRACT

Grasscutter-farming constraints are well documented in West Africa. However, data on how a specialized public institute translates its infrastructure and farming expertise into breeding stock production, research, and extension services remain limited. This exploratory case study assessed institutional capacities and evidence gaps at the Grasscutter Farming Research and Extension Institute (IRVAG) in Moata, Guinea. Data were collected from April 13 to June 13, 2024, using document analysis, semi-structured interviews with 12 targeted institutional respondents (representing administrative, technical, and trainee roles), three role-based focus groups, direct observation, and routine population surveys. The results revealed that, at baseline, 48 animals, including 19 males and 29 females, occupied 35 of the 124 enclosures, representing an occupancy rate of 28.2%. Fifteen live births were recorded during the two-month observation period, and no deaths or clinical illnesses were reported. Among the 14 perceived constraints, insufficient funding (5.00), limited veterinary equipment (4.50), weak mobilization of external resources (3.83), insufficient scientific capacity (3.58), and weak partnerships (3.00) received the highest average scores. The consensus on this ranking was moderate (Kendall's W = 0.343, $\chi^2 = 53.49$, df = 13, $p < 0.001$). Contrary to the obstacles frequently reported at the farm level, animal feed scarcity and labour shortages received the lowest average scores at this institution. The study thus contributes to establishing an institutionally adapted framework by identifying a gap between available infrastructure and its operational use, while also highlighting production and conservation outcomes.

Keywords: *Biodiversity conservation, Grasscutter, Production constraints, Sustainable wildlife use.*

INTRODUCTION

Across many West African communities, hunting and bushmeat trade intersect with food security, rural livelihoods, and biodiversity conservation (Cawthorn & Hoffman, 2015; Wilkie et al., 2016). Globally, unsustainable hunting exerts substantial pressure on mammal populations, particularly in tropical regions such as West Africa, where persistent consumer demand drives bushmeat harvesting and sustains associated income-generating value chains (Ripple et al., 2016). However, policies and management decisions still insufficiently account for its environmental and health costs (Olunusi, 2024).

The grasscutter (*Thryonomys swinderianus*, Temminck 1827) is an African rodent widely distributed across sub-Saharan Africa (Adu et al., 2017; Babarinde et al., 2023). Its size and high market value make it both a heavily hunted and farmed species in parts of West and Central Africa (Adu et al., 2017; Kilwanila et al., 2021; Babarinde et al., 2023). In several West African countries, hunters deliberately burn vegetation to flush out and capture grasscutters, particularly in dense bushland during the dry season (Food and Agriculture Organisation of the United Nations [FAO], 2006). The West Africa Bushmeat Conference proceedings explicitly identify this practice as a major source of bushfires and recommend domesticating and developing grasscutter farming (FAO, 2006). However, the extent of this phenomenon is context-dependent and should not be extrapolated without local data on ignition sources and hunting practices (Amoako & Gambiza, 2022).

Grasscutter farming could support animal-protein supply, diversify rural income, and reduce dependence on wild capture, potentially mitigating pressures on wildlife populations and ecosystem functioning (Kilwanila et al., 2021; Wicander & Coad, 2018). However, these outcomes are not automatic, and their realisation depends on technical performance, access to breeding stock and markets, consumer preferences, regulation, and evidence that farming changes hunting behaviour rather than simply adding a new source of meat (Adu et al., 1999; Annor & Kusi, 2008; Wicander & Coad, 2018; Edderai et al., 2001).

Farming, feeding, and reproductive management techniques are relatively well documented, and data from Benin indicate that some grasscutter farms can be economically viable (Mensah et al., 2011). However, grasscutter farming does not necessarily replace hunting (Wicander & Coad, 2018). Its adoption and ability as an alternative livelihood depend on the availability and affordability of breeding stock and start-up capital (Annor & Kusi, 2008), access to veterinary care and technical support (Akinola et al., 2015; Wicander & Coad, 2018), as well as the price competitiveness and social acceptability of farmed meat (Secretariat of the Convention on Biological Diversity, 2011). A systematic review identified major geographical gaps in African grasscutter research, potentially limiting access to evidence-based farming and conservation practices (Kilwanila et al., 2021).

In Guinea, the Institute for Research and Extension of Grasscutter Farming (IRVAG) has a public mandate to conduct research and extension on grasscutter farming and production. A ministerial decree issued on July 30, 2025, following the 2024 data collection, reorganized the institute by merging it with the Tanéné and Kankan centres and defining its current structure and functions (MESRS, 2025). The Moata site, located in Guinea's forest region and serving as the headquarters, is expected to contribute breeding stock, research, producer training, and extension services. Although technical and adoption-related barriers to cane rat farming have been identified in West Africa (Adu, Alhassan, and Nelson 1999; Annor and Kusi 2008; Wicander and Coad 2018), the scientific literature does not document how a specialized public institution uses its material resources or which organizational constraints its staff prioritizes. This study provides a circumscribed institutional diagnosis that links three types of data within a public institution: the rate of physical resource utilisation, short-term data on captive animals, and staff evaluations based on their roles. This combination makes it possible to identify known local barriers, unaddressed priorities, and missing data that prevent a reliable assessment of production and conservation performance.

The study addressed three questions:

(i) How fully were IRVAG's available enclosures and short-term breeding capacity being used during the study period?

(ii) Which institutional constraints did the participating administrative, technical, and internship staff prioritise, and how consistent were their rankings?

(iii) Which institutional assets and evidence gaps should guide a testable programme for improving production, research, and extension performance?

MATERIALS & METHODS

Study Site and Institutional Context

The study was conducted at the IRVAG-Moata facility in Yalenzou Rural Commune (Figure 1), which is now the headquarters for national grasscutter farming following a recent government decision to merge it with Tanéné and Kankan (MESRS, 2025). Therefore, data collection preceded the ministerial reorganisation of IRVAG in July 2025.

Moata is approximately 20 km from N'Zérékoré, the regional capital, along the N'Zérékoré–Lola Road leading to Côte d'Ivoire. The surrounding environment features productive vegetation and locally available grasses and other forages used as grasscutter feed. Available infrastructure includes administrative and technical buildings, a grasscutter breeding building, a laboratory, and training facilities. Beyond grasscutter farming, IRVAG plans to develop complementary production units, including snail and fish farming. These projects are part of the institute's overall strategy to diversify animal protein production and expand its research, training, and extension activities. However, these activities remain at the project stage rather than fully operational production units.

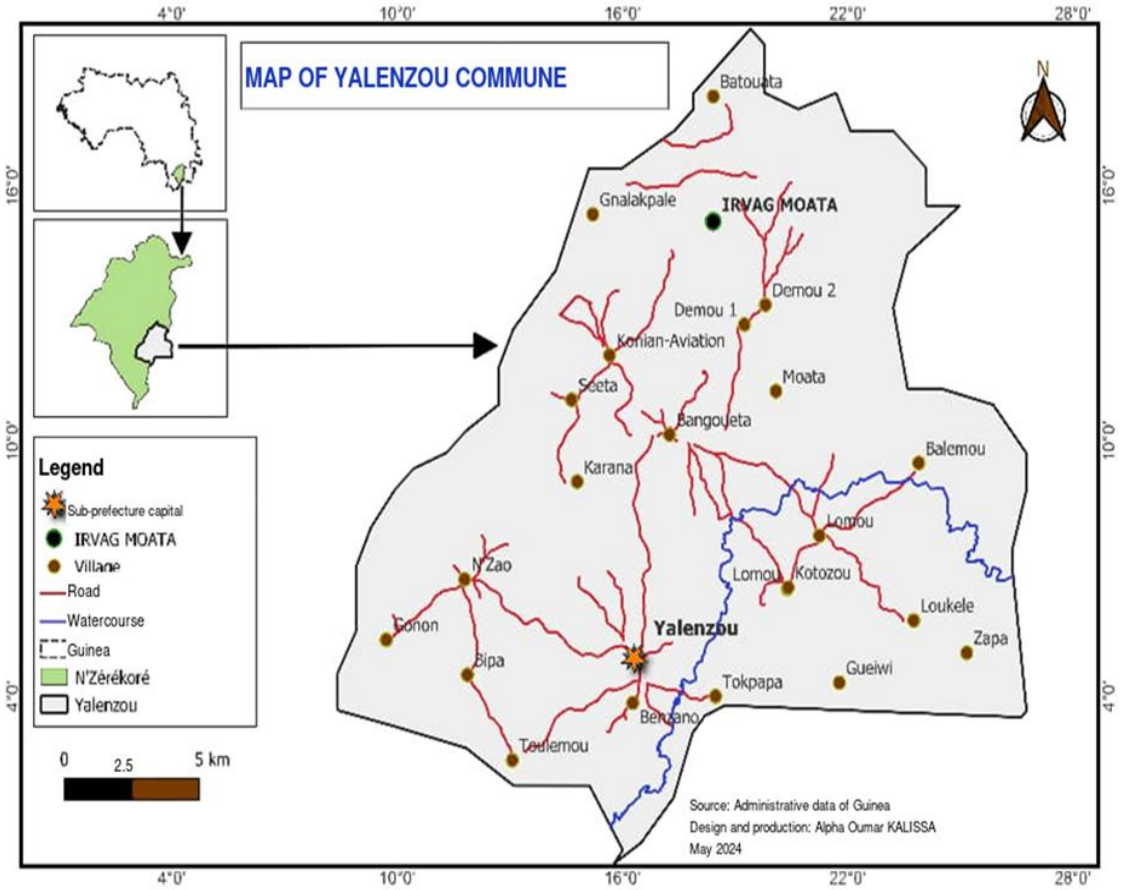

Figure 1. Location of the IRVAG-Moata study site in Yalenzou Rural Commune, Guinea.

Study Design

An exploratory case study was conducted at IRVAG-Moata from April 13 to June 13, 2024, as part of an undergraduate fieldwork placement. This case study examined the operations, resources, use of physical capacities, and recording systems within a public institution specializing in production, research, and dissemination.

Data Sources and Collection

Data were collected from five complementary sources to address the study objectives:

First, a targeted review of scientific literature on grasscutter farming and institutional documents synthesized existing knowledge and clarified IRVAG's mandate. The team assessed IRVAG's organisational charts, activity reports, partnership documents, and extension reports, and, more recently, the ministerial decree of July 30, 2025, following government reorganisation after the 2024 data collection.

Secondly, semi-structured institutional interviews in French were conducted with 12 purposively selected institutional respondents composed of 3 livestock technicians with practical expertise in grasscutter farming, 4 administrative staff members including the director, the deputy director, the scientific secretary, and the equipment maintenance manager with direct institutional responsibilities; and 5 trainees from the Department of Natural Resource Management at the University of N'Zérékoré who had participated for 3 years in IRVAG's activities during their internships. Interviews were conducted using a predefined list of open-ended questions covering financial and human resources, labour and working conditions, climatic, sociocultural, and religious factors, mobilisation of external resources, availability of animal feed, legal and regulatory frameworks, infrastructure, equipment, and animal health capacity, partnerships, scientific capacity, sector visibility, and development prospects. Each interview lasted up to 30 min; interviewees rated each potential constraint on a five-point priority scale from 1 (very low) to 5 (very high), explained their ratings, and, when possible, proposed solutions.

Thirdly, individual interviews were followed by an hour-long role-specific group discussion held in 3 separate sessions with (i) administrative staff, (ii) livestock technicians, and (iii) interns to gather perspectives on their respective roles and areas of expertise.

Fourthly, direct observations were conducted throughout the fieldwork placement. Observations covered administrative operations, facilities, animal enclosures, feeding and husbandry practices, record-keeping procedures, complementary production activities, the surrounding farm environment, and neighborhood excursions in search of information.

Fifthly, we compiled descriptive data on the captive population from available population records and field monitoring. The variables included the number and occupancy of enclosures, sex distribution, reported weight range, reproductive events, births, illnesses, and mortality during the study period.

Statistical Analysis

We summarized grasscutter husbandry and population dynamics data using descriptive statistics. We calculated the apparent occupancy rate as the number of occupied enclosures divided by the total number of available enclosures. We organized qualitative information into a constraint-effect-response matrix based on the areas covered by the interview guide.

We calculated a weighted-average score for each constraint by multiplying each response category's frequency by its weighting coefficient, summing the products, and dividing by the total number of respondents (Formula 1). The constraints were ranked in descending order of weighted-average score (Table 1), with the highest score indicating the highest priority; constraints with a score below 3.00 were therefore interpreted as having low or very low average priority. Constraints scoring at or above the scale midpoint ($\bar{X} \geq 3.00$) were retained for focused discussion. This threshold was used solely to prioritize discussion, but the scores for the 14 constraints were retained and used to calculate Kendall's concordance coefficient.

$$\bar{X} = \frac{\sum_{i=1}^{k} f_i W_i}{N} \quad (1)$$

Where:

$\bar{X}$= weighted mean score of the constraint

f_i= number of respondents selecting category i
W_i= numerical weight assigned to category i
$k = 5$ = number of response categories
$N = \sum f_i = 12$, total number of respondents
$\sum$ = sum of all frequency-weight products.

Table 1. Constraint priority classification

Weighted mean	Interpretation
$3.00 < \bar{X} \leq 5.00$	Above the midpoint
$\bar{X} = 3.00$	Midpoint
$1.00 \leq \bar{X} < 3.00$	Below midpoint

Inter-rater agreement assessment

Kendall's concordance coefficient (W) summarizes the degree of similarity in the ranking of the 14 constraints by the 12 participating institutional respondents (Formula 2). W ranges from 0 (no agreement) to 1 (complete agreement), and statistical significance was assessed using Friedman's chi-squared approximation with k - 1 degrees of freedom. The p-value indicated that the observed agreement was unlikely under random classification, while the W-value assessed the strength of agreement; statistical significance did not indicate strong consensus.

$$W = \frac{X_F^2}{m(k-1)} \quad (2)$$

Where:
W is Kendall's coefficient of concordance
X_F^2, which is Friedman's chi-square statistic
m is the number of respondents
k is the number of assessed constraints (N =14).

Following Schmidt (1997), Kendall's W is interpreted as very weak (0.00–0.10), weak (0.10–0.30), moderate (0.30–0.50), strong (0.50–0.70), and very strong (0.70–1.00) concordance.

Table 2. Interpretation of Kendall's Coefficient of Concordance (W)

Value of (W)	Level of agreement
$0.00 \leq W < 0.10$	Very weak
$0.10 \leq W < 0.30$	Weak
$0.30 \leq W < 0.50$	Moderate
$0.50 \leq W < 0.70$	Strong
$0.70 \leq W \leq 1.00$	Very strong

Data triangulation and integration

We triangulated evidence across document review, individual institutional interviews, three role-specific group discussions, direct observations, and routine population records. We treated a finding as corroborated when at least two source types supported it. Divergent evidence was reported explicitly rather than averaged into a single interpretation. The integrated data enabled the development of a constraint-implication-response matrix and identified avenues for further development.

RESULT

Production Capacity and Captive Population

The facility comprised 124 pens, of which 35 were initially occupied, representing an apparent occupancy rate of 28.2%. The 48 animals initially counted included 19 males and 29 females (female/male ratio = 1.53), with recorded weights ranging from 2.0 to 2.5 kg. Four females gave birth to 15 live offspring during the two-month observation period (Table 3). All 15 offspring were alive at the end of this period, and no cases of illness or death were recorded. We reported no illness or mortality during our visit.

Table 3. Descriptive Indicators of the Grasscutter Farm at the Time of the Study

Indicator	Observed value
Observed physical enclosures	124
Occupied enclosures at baseline	35 (28.2%)
Initial population	48
Baseline sex composition	19 Male and 29 Female
Recorded weight range	2.0-2.5 kg
Final population	63
Offspring alive at end of observation	15/15 (100%)
Offspring deaths recorded during observation	0
Clinical illness recorded during observation	0 cases

Institutional and Technical Constraints

Table 4 presents the five highest-scoring constraints among the 14 assessed that met the threshold ($\bar{X} \geq 3.00$) and were retained in the Kendall concordance. In contrast, constraints scored below the threshold (< 3.00) were excluded from the priority list results (Table 4).

Inadequate financing received the highest mean score (5.00/5), with all 12 respondents rating it very high. Respondents linked this constraint to production costs, equipment replacement, infrastructure maintenance, and service development. Limited animal-health equipment ranked second (4.50), indicating perceived gaps in diagnostic, preventive, and routine monitoring resources. Weak external resource mobilisation ranked third (3.83). Respondents linked this to limited project development, partnership building, and access to complementary financing. Unsatisfactory scientific capacity ranked fourth (3.58), particularly for research design, data management, publication, and technical communication. Weak partnerships received an average score of 3.00, indicating moderate perceived importance. Although respondents considered these partnerships insufficient, they reported ongoing collaborations with the University of N'Zérékoré, the National Institute of Agronomic Research of Benin (INRAB), the Guinean Institute of Agronomic Research (IRAG), and the Higher Institute of Agronomy and Veterinary Medicine of Faranah (ISAVF). Other constraints ranked sixth to fourteenth received relatively low average scores (1.58 to 2.92), with labour shortages and animal feed scarcity jointly ranking last, as respondents considered them less urgent.

The overall constraints help explain the gap between available infrastructure and the observed low occupancy rate.

Table 4. Main constraints and ranking

Constraint	Priority level frequency (N = 12)					Mean ($\bar{X}$)	Rank
	Very low	Low	Moderate	High	Very high		
Inadequate financing	0	0	0	0	12	5.00	1
Limited animal-health equipment	0	0	2	2	8	4.50	2
Weak external resource mobilisation	2	1	1	1	7	3.83	3
Unsatisfactory scientific capacity	1	3	1	2	5	3.58	4
Weak partnership	5	0	2	0	5	3.00	5
Cultural constraints	5	0	2	1	4	2.92	6
Weak sector visibility	6	0	1	1	4	2.75	7
Inadequate human resources	5	1	2	1	3	2.67	8
Poor working conditions	7	0	2	1	2	2.25	9
Climatic constraints	8	0	1	0	3	2.17	10
Inadequate legal framework	8	0	2	0	2	2.00	11
Limited opportunities	9	1	0	0	2	1.75	12
Limited labour	9	0	2	1	0	1.58	13
Feed scarcity	9	1	1	0	1	1.58	13
Kendall's coefficient of concordance: Constraints: 14, W = 0.343, χ^2 (13) = 53.49, p < 0.001.							

Table 4 contains 14 constraints evaluated by 12 respondents on a 1–5 scale. Kendall's coefficient indicated moderate, statistically significant agreement across all 14 constraints (W = 0.343, $\chi 2(13) = 53.49$, $p < 0.001$).

The role-specific group discussions provided context on financing, equipment, scientific staffing, partnerships, and communication needs. Across source types, the most consistently identified needs were predictable financing, functional technical equipment, strengthened scientific and project-development capacity, and more systematic communication and extension.

Institutional Strengths and Opportunities

Despite the constraints, observations and interviews identified several potential assets (Table 5), including staff experience in routine husbandry, locally available forage and good agroecological conditions, and administrative and livestock infrastructure. The Institute's specialised public service mandate also constitutes a comparative advantage. It enables the integration of applied research, breeding stock production, demonstrations, animal health certification, and advisory services for producers. Universities, livestock services, farmers' organisations, biodiversity projects, surrounding mining companies, and other development partners offer a potentially favourable institutional environment, provided collaboration is formalized around measurable results.

Table 5. Institutional assets and hypothesised contributions

Institutional asset	Potential value	Potential conservation advantage
Staff technical expertise	Routine husbandry and producer training	Could improve captive-breeding practice
Locally available forage	Potential lower feed costs	Could improve the economic viability of farming relative to wild capture
Physical existing infrastructure	Base for future expansion	Could support increased captive production
Specialised public mandate	Coordination of research and extension	Could connect production with sustainable use objectives
Potential partner network	Finance, equipment and expertise	Could strengthen production, research and conservation actions

DISCUSSION

Primarily Institutional Bottleneck

Findings suggest that IRVAG's main bottleneck is institutional capacity to convert physical assets and husbandry experience into reliable supply of breeding stock, producer training, and extension services. The low enclosure occupancy rate observed reflects a significant gap between physical infrastructure and available production capacity. This finding is consistent with evidence from communal livestock systems in Zimbabwe, where animal health problems, water and food shortages, and inadequate agricultural extension services have jointly limited animal production (Mutibvu et al., 2012). Consequently, infrastructure rehabilitation alone is unlikely to improve performance if these interdependent operational constraints are not addressed simultaneously.

The absence of reported clinical illness or mortality during the evaluation period is an encouraging short-term observation that should be maintained, without inference, as diagnostic capabilities were limited. Standardized longitudinal monitoring should therefore record each animal's identity, pre- and post-weaning mortality, fertility and conception rates, litter size, birth intervals, growth, feed intake, and production cost per breeding animal. Previous research suggests that grasscutter breeding can be managed more effectively when breeding animals are individually identified, mating is documented, inbreeding is controlled, and pregnancies are detected early (Edderai et al., 2001). Implementing such a monitoring system would enable the IRVAG to assess production efficiency, identify losses, and make informed decisions on husbandry and management.

The assets presented in Table 5 provide an important foundation for strengthening grasscutter farming at IRVAG. Existing technical expertise can support farming, producer training, and livestock supply, thereby reducing dependence on other producer institutions in the sub-region. Locally available forage can reduce production costs and improve rural producers' access to grasscutter farming. Fortunately, the rainy season lasts longer than the dry season. Similarly, existing infrastructure offers opportunities for expansion. However, the low occupancy rate

of enclosures demonstrates that infrastructure alone cannot guarantee increased production without adequate funding, equipment, biosecurity, and skilled personnel. IRVAG's specialised public mandate also lends institutional legitimacy to coordinating research, extension, and conservation activities, while partnerships could mobilize additional funding, technology, and expertise. Nevertheless, these strengths represent potential rather than proven reality in the conservation sector. Their contribution to reducing poaching and bushfires will depend on effective institutional investments, farmer adoption, market access, and long-term monitoring of hunting practices and fire frequency (Annor & Kusi, 2008; Wicander & Coad, 2018).

Grasscutter farming as a conservation strategy

The environmental rationale for grasscutter farming is conceptually plausible, but its conservation benefits remain empirically unproven. A key question is whether strengthening IRVAG's institutional capacity could sufficiently increase captive production to reduce reliance on fire-assisted hunting and, consequently, the resulting pressures on wildlife populations and habitats. FAO (2006) documents the use of vegetation burning to hunt grasscutter in West Africa, while Babarinde et al. (2023) identify hunting as a persistent pressure on the species. Nevertheless, the hypothesis that increased captive production would reduce hunting and fire use requires empirical validation.

Substitution will likely remain partial if farmed meat is more expensive than wild meat, breeding stock is unavailable, consumers clearly prefer wild game meat, or hunting remains more profitable than farming. Data from Benin suggest that the economic viability of grasscutter farming depends on farm productivity, access to finance, and efficient business organisation (Mensah et al., 2011). Policy interventions should therefore go beyond investments in physical infrastructure and encompass breeding stock production, animal health and extension services, producer financing, market development, consumer preferences, hunting regulations, and impact monitoring as components of an integrated system. A longitudinal assessment of farmed meat supply, relative market prices, consumer demand, hunting effort, and fire frequency would be needed to determine whether farmed grasscutters generate measurable conservation benefits.

Repositioning IRVAG as a Rural Innovation Platform

IRVAG could be repositioned as a rural innovation platform rather than operating solely as a government production centre. Its main functions could include maintaining a genetically controlled breeding population, preventing inbreeding through pedigree management, producing and distributing traceable breeding animals, supporting animal health, training producers, collecting data on reproduction and production, and coordinating a network of pilot farms. This model would enable IRVAG to fulfill its research mandate while establishing a structured mechanism for transferring breeding animals, technical knowledge, and livestock innovations to rural communities. The experience of small-scale grasscutter farming in Ghana demonstrates the importance of appropriate management practices and ongoing technical support for producers (Adu et al., 1999).

This strategy should also consider animal welfare, biosecurity, food safety, and public health. A regulated value chain for farmed grasscutter could reduce the risks associated with the informal capture, handling, and sale of bushmeat by improving control and traceability. However, this would also entail institutional responsibilities for disease surveillance, hygienic slaughter and processing, animal identification, product traceability, and movement control. Therefore, the IRVAG should operate within a collaborative framework involving veterinary and public health services, environmental and wildlife authorities,

research institutes, producer organisations, and local communities, rather than developing as an isolated or parallel institution.

Policy and Technical Implications

The findings allow us to propose an intervention framework that combines immediate measures to stabilize grasscutter farming practices with medium-term investments in research, extension services, infrastructure, and institutional partnerships (Table 6). Rather than presenting a generic list of equipment needs, the proposed actions are prioritized by priority area, action, and measurable performance indicators.

Table 6. Proposed roadmap for strengthening IRVAG and evaluating its impact.

Priority area	Core actions	Performance indicators
Production unit stabilisation	Diversify financing, assess nutrition and animal-health needs, establish standardised production records.	Enclosure occupancy (%), liveborn offspring per breeding female, mortality (%), functional equipment (%), and annually mobilised fund.
Breeding stock protection	Apply biosecurity protocols, conduct veterinary checks	Individually identified animals (%), morbidity and mortality (%), pedigree records (%).
Expanding grasscutter farming	Select pilot villages, train and mentor farmers, distribute traceable breeding stock.	Number of supported pilot villages, farmers trained.
Testing conservation outcomes	Design baseline and follow-up hunting surveys, fire mapping, market monitoring, and biodiversity assessment with comparison sites.	Hunting effort, farmed and wild meat prices, fire frequency, burned area, and selected biodiversity indicators.
Value chain development	Establish regulatory, certification, and traceability procedures, formalise partnership and market links.	Number of active partnerships signed, number of certified breeding animals sold, registered producers.

CONCLUSION

IRVAG-Moata has physical infrastructure, a public mandate, and experienced staff that could support grasscutter farming in Guinea. An operational production unit confirms that the institute is not starting from zero. However, the substantial underuse of available facilities reveals a persistent gap between physical capacity and institutional performance. Inadequate and irregular financing, limited veterinary and research resources, and weak partnerships currently prevent IRVAG from fully fulfilling its mandate for production, research, and extension. Targeted institutional strengthening could enable IRVAG to maintain healthy breeding stock, improve access to breeding animals, disseminate good husbandry practices, and support a regulated rural grasscutter farming sector.

Nevertheless, it would be scientifically premature to conclude that its interventions are reducing fire-assisted hunting, vegetation fires, or biodiversity loss. Such conservation outcomes must be demonstrated through an integrated monitoring and evaluation system combining production and market data, hunting surveys, satellite-based fire observations, ecological indicators, and comparisons between intervention and non-intervention sites. The central policy priority is therefore not merely to rehabilitate facilities, but to transform IRVAG into a performance-oriented rural innovation platform.

Long-term studies involving farmers, hunters, markets, and wildlife monitoring are therefore needed to evaluate its wider conservation and socioeconomic impacts.

Declaration by Authors

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REFERENCES

1. Adu EK, Alhassan WS, Nelson FS. Smallholder farming of the greater cane rat, Thryonomys swinderianus, Temminck, in southern Ghana: A baseline survey of management practices. Tropical Animal Health and Production. 1999; 31, 223–232. https://doi.org/https://doi.org/10.1023/A:1005267110830
2. Adu EK, Asafu-Adjaye A, Hagan ABA, Nyameasem JK. The grasscutter: An untapped resource of Africa's grasslands. Livestock Research for Rural Development. 2017; 29(3), 47. https://doi.org/10.1023/A:1005267110830
3. Akinola LAF, Etela I, Emiero SR. Grasscutter (Thryonomys swinderianus) Production in West Africa: Prospects, Challenges, and Role in Disease Transmission. American Journal of Experimental Agriculture. 2015; 6(4), 196–207. https://doi.org/10.9734/AJEA/2015/14194
4. Amoako EE, Gambiza J. Fire use practices, knowledge and perceptions in a West African Savanna Parkland. PLoS ONE, 17(5), e0240271. 2022; https://doi.org/10.1371/journal.pone.0240271
5. Annor SY, Kusi C. Factors influencing the adoption of grasscutter production in the Brong Ahafo region of Ghana. Livestock Research for Rural Development. 2008; 20(9), 1–10. https://www.lrrd.org/lrrd20/9/anno20141.html.
6. Babarinde IA, Adeola AC, Djagoun CAMS, Nneji LM, Okeyoyin AO, Niba G, Wanzie NK, Oladipo OC, Adebambo AO, Bello SF, Ng'ang'a SI, Olaniyi WA, Okoro VMO, Adedeji BE, Olatunde O, Ayoola AO, Matouke MM, Wang Y, SankeOJ, Murphy RW. Population structure and evolutionary history of the greater cane rat (Thryonomys swinderianus) from the Guinean Forests of West Africa. Frontiers in Genetics. 2023; 14(February), 1041103. https://doi.org/10.3389/fgene.2023.1041103
7. Cawthorn DM, Hoffman LC. The bushmeat and food security nexus: A global account of the contributions, conundrums and ethical collisions. Food Research International. 2015; 76, 906–925. https://doi.org/10.1016/j.foodres.2015.03.025
8. Edderai D, Ntsame M, Houben P. Gestion de la reproduction en aulacodiculture: synthèse des outils et méthodes existants. INRAE Productions Animales. 2001 ; 14(2) :97–103. https://doi.org/10.20870/productions-animales.2001.14.2.3729
9. Food and Agriculture Organisation of the United Nations. West Africa Bush Meat Conference. Tackling the Bushmeat Crisis in Africa, Accra, Ghana. 2006; 22–24 February 2005, February, 63. https://www.fao.org/4/ai791e/ai791e00.pdf
10. Kilwanila SI, Msalya GM, Lyimo CM, Rija AA. Geographic biases in cane rat (Thryonomys) research may impede broader wildlife utilization and conservation in Africa: A systematic review. Scientific African. 2021; 12, e00785. https://doi.org/10.1016/j.sciaf.2021.e00785
11. Mensah E, Mensah R, Pomalegni S, Mensah G, Ibrahimy A. Viabilité et financement des élevages d'aulacode (Thryonomys swinderianus) au Bénin. International Journal of Biological and Chemical Sciences. 2011; 5(5):1842–1859. https://doi.org/10.4314/ijbcs.v5i5.7
12. MESRS. Arrêté A/2025/702/MESRSI/CAB/SGG du 30 juillet 2025, portant organisation et mode de fonctionnement de l'Institut de Recherche et de Vulgarisation de l'Aulacodiculture de Guinée (IRVAG), 10 (2025). https://guineelex.com/decrets-arretes/arrete-a-2025-702-mesrsi-cab-sgg
13. Mutibvu T, Maburutse BE, Mbiriri DT, Kashangura MT. Constraints and opportunities for increased livestock production in communal areas: A case study of Simbe, Zimbabwe. Livestock Research for Rural Development. 2012; 24(9), article 165. https://www.lrrd.org/lrrd24/9/muti24165.
14. Olunusi BO. Exploring bushmeat market with a view toward social and ecological justice in Ibadan Metropolis, Nigeria. Frontiers in Conservation Science. 2024;

5(November), 1401308. https://doi.org/10.3389/fcosc.2024.1401308
15. Ripple WJ, Abernethy K, Betts MG, Chapron G, Dirzo R, Galetti M, Levi T, Lindsey PA, Macdonald DW, Machovina B, Newsome TM, Peres CA, Wallach AD, Wolf, Young H. Bushmeat hunting and extinction risk to the world's mammals. Royal Society Open Science. 2016; 3(10), 160498. https://doi.org/10.1098/rsos.160498
16. Schmidt R. Managing Delphi surveys using nonparametric statistical techniques. Decision Sciences. 1997; 28(3):763–774. https://doi.org/10.1111/j.1540-5915.1997.tb01330.x
17. Secretariat of the Convention on Biological Diversity. Livelihood alternatives for the unsustainable use of bushmeat (Issue 60). 2011; https://www.cbd.int/doc/publications/cbd-ts-60-en.pdf.
18. Wicander S, Coad L. Can the Provision of Alternative Livelihoods Reduce the Impact of Wild Meat Hunting in West and Central Africa ? Conservation and Society. 2018; 16(4), 441–458. https://doi.org/10.4103/cs.cs_17_56
19. Wilkie DS, Wieland M, Boulet H, Le Bel S, Vliet NV, Cornelis D, Briacwarnon V, Nasi R, Fa JE. Eating and conserving bushmeat in Africa. African Journal of Ecology. 2016; 54, 402–414. https://doi.org/10.1111/aje.12392.

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