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Assessment of key attributes of traditional producers in the prospective geographical indication value chain of attapady black goat

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Abstract
The study explored the key attributes of the traditional producers of the prospective Geographical Indication (GI) value chain of Attapady Black goat, in the Attapady Block Panchayat of Kerala. Using an exploratory research design, 200 producers were identified through key informant technique and snowball sampling. Data were collected *via* focus group discussions, personal interviews, GIS tools, and direct observation across 193 tribal hamlets. The sample comprised predominantly women (64%), older adults, and members of the Irula community (85%), with smaller representation from Muduga and Kurumba. Goat holdings averaged 4.77 per household, with most sales occurring within hamlets, primarily driven by economic needs, seasonal demand, and cultural practices. Producers largely relied on intermediaries for marketing. Thematic analysis highlighted the vital role of indigenous knowledge in maintaining breed purity, biodiversity conservation, low-input rearing, ethno-veterinary practices, and cultural heritage. Findings underscore the central role of tribal producers as custodians of the Attapady Black goat and its traditional production system.

Keywords: Geographical Indication (GI), attapady black goat, producer, attribute, value chain, traditional knowledge

1. Introduction
The Attapady Black goat, an indigenous breed from the Attapady hill tracts of the Western Ghats in Kerala's Palakkad district, has been developed and sustained by the local tribal communities *viz.*, Irula, Muduga, and Kurumba. Traditionally reared under zero- or low-input extensive grazing systems in the forests of the Attapady hills, the breed is primarily valued for its superior meat quality, resilience, adaptability to harsh climates, and disease resistance. The unique breed, officially recognized as a registered breed by ICAR-NBAGR, is a strong candidate for Geographical Indication (GI) status.

A geographical Indication (GI) is a sign used on products that conveys information about their geographical origin, and is useful in identifying the reputation, quality, or other characteristics essentially linked to that origin. GI value chains encompass territory and biodiversity, along with knowledge and practices, serving as both natural and cultural inputs for production. GIs enable indigenous producer organizations to market unique, non-generic products by creating a distinct territorial identity and reputation. GI differentiation benefits rural producers by helping them market final goods, including unprocessed quality fresh produce that is packaged and labeled. GI registration would provide legal recognition to groups of producers, but effective protection requires codified production rules and a governance system to ensure compliance. Such governance transforms the GI from a legal right into a mechanism that safeguards traditional practices, enhances product value, and upholds quality standards.

Within this framework, the tribal producers of Attapady act as custodians of traditional knowledge, though they face challenges in fully realizing the economic benefits of potential GI protection. The study emphasizes their central role in the Attapady Black goat value chain, where their knowledge, sustainable management, and adaptive rearing practices preserve the breed's distinctive qualities and cultural significance.

Understanding the key attributes of these producers can support their collectivization within the local value chain, enabling them to organize and mobilize to enhance product value.

2. Materials and Methods

2.1 Ethical approval and informed consents

Approval to conduct this study was obtained through the following permissions: Proceedings of the Kerala Veterinary and Animal Sciences University (Approval No KVASU/DAR/A2/440/2023(2), dated 05.10.2023); research grant approval from the Dean, College of Veterinary and Animal Sciences, Mannuthy (Order No. CVAS/MTY/ACAD-3/6689/2023, dated 07.12.2023); permission letters from the Nodal Officer, Attapady (RDOOTP/2315/2023-A1, dated 06.11.2023 and 16.12.2023); and permission from the Project Officer, Integrated Tribal Development Project (ITDP), Attapady (E-4825/2022, dated 27.11.2023 and 27.12.2023).

2.2 Study area

The study was carried out in the Attapady Block Panchayat of Palakkad district, Kerala, covering the Grama Panchayats of Agali, Pudur, and Sholayur (Figure 1).

Sl No	Name	Sl No	Name	Sl No	Name
001	Mele Mully	066	Veerannoor	131	Marappalam
002	Thazhe Mulli	067	Chindakki Ooru	132	Keeripathi
003	Kuppan Colony	068	Karuvara	133	Vadakke Kadampara
004	Muthlathara	069	Karuvara Farm	134	Thalappadi
005	Nattakkal Chundappti	070	Ambalamkunnu	135	Thekke Kadampara
006	Mele Chundapetty	071	Kottiyurkunnu	136	Nallasinga
007	Elachivazhy	072	Mukkali	137	Uthukuzhy
008	Anachakombu	073	Cholakkad	138	Theke Chavadiyur
009	Ooradam	074	Mele Kakkupadi	139	Mele Sambarkode
010	Karathoor	075	Kakkupadi	140	Thazhe Sambarkode
011	Thazhe Palakkayur	076	Potikkal	141	Mele Agali
012	Mele Palakkayur	077	Chemmanoor	142	Thazhe Agali
013	Chalayur	078	Seenkara	143	Nellipathi
014	Mele Chavadiyur	079	Kollam Kadavu	144	Neeli Kuzhi
015	Panganarippallam	080	Osathyoor	145	Goolikadav
016	Konamkuthy	081	Mele Kandiyur	146	Nakkupathi Piravu
017	Venthavatty	082	Anakkal	147	Nakkupathi
018	Thazhe Chavadiyur	083	Mele Abanoor	148	Guddayoor
019	Nayanampetty	084	Thazhe Abanoor	149	Dundoor
020	Thachampadiyur	085	Vetiyoor	150	Dhoni Kundu
021	Thazhe Moolakombu	086	Adiya Kandiyur	151	Manthi Mala
022	Nadu Moolakombu	087	Kookampalayam	152	Mamana
023	Mele Moolakombu	088	Alamkandi	153	North Ommala
024	Pudur	089	Koravankandi	154	Daivakundu
025	Ummathampadi	090	Karidavam	155	Jellipara
026	Pattanakkal	091	Cheraman Kandi	156	Mavukundu
027	Swarnagadha	092	Pilamaram	157	Ommala
028	Thazhe Chootra	093	Kavundikal	158	Vandanpara
029	Mele Chootra	094	Kunnanchala	159	Kallamala
030	Chembavattakkadu	095	Mele Parapanthara	160	Odapetti
031	Arallkonam	096	Cheerakadavu	161	Onthamala
032	Thazhe Bhoothayar	097	Thazhe Parapanthara	162	Paravalvu
033	Edavani	098	Narasimokku	163	Karadipara
034	Galasi	099	Kottamodu	164	Koravanpadi
035	Mele Thudukki	100	Bhoothivazhy	165	Kattekadu
036	Thazhe Thudukki	101	Pattimalam	166	Puthupadi 2
037	Mele Bhoothayar	102	Velam Padika	167	Puthupadi 1
038	Pazhayur	103	Vellamari	168	Anagadha
039	Thekkupana	104	Kalakandiyur	169	Karara
040	Pilamarachodu	105	Ompadiyur	170	Kathirampathy
041	Kallpetti	106	Koodapetti	171	Mettuvazhi
042	Valavetty	107	Thekkumukyoor	172	Chittoor
043	Dodukatty	108	Choriyannur	173	Kottamala
044	Kolappadi	109	Vadakottathara	174	Chundakulam
045	Paloor	110	Nattakallur	175	Vengakadavu
046	Dhanyam	111	Kottathara	176	Kollamkadu Marnati
047	Bomiyapadi	112	Naikarapadi	177	Marnati
048	Thekuvatta	113	Karayoor	178	Koilkkudam
049	Padavayal	114	Vannathara Medu	179	Pettikal
050	Thazhe Manjikandi	115	Vannathara	180	Kuthadichala
051	Mele Manjikandi	116	Koodanchala	181	Maruthanchala
052	Gotiyarkandi	117	Bodichala	183	Swarnapirivu
053	Anaikatti	118	Veetikundu	183	Theke Puthur Chavadiyur
054	Kurukkathikkal	119	Kallakara	184	Vayalur
055	Kadukumanna	120	Chinna Kalakara	185	Kavanmedu
056	Mele Anavai	121	Mattathukad	186	Sholayur
057	Thazhe Anavai	122	Vattalaki	187	Najaan Colony
058	Kenattukara	123	Vattalaki Laksham Veedu	188	Varagampadi
059	Palappada	124	Dasannoor	189	Gonjiyur
060	Murugala	125	VFS 2nd Site	190	Vechapathi
061	Thadikundu	126	Anakatti	191	Vellakulam
062	Chindakki 3	127	VFS 3rd Site	192	Moolagangal
063	Chindakki 2	128	Kulukkur	193	Muthikulam
064	Chindakki Thazhe Ooru	129	Uriyan Chala		
065	Chindakki 1	130	Thoova		

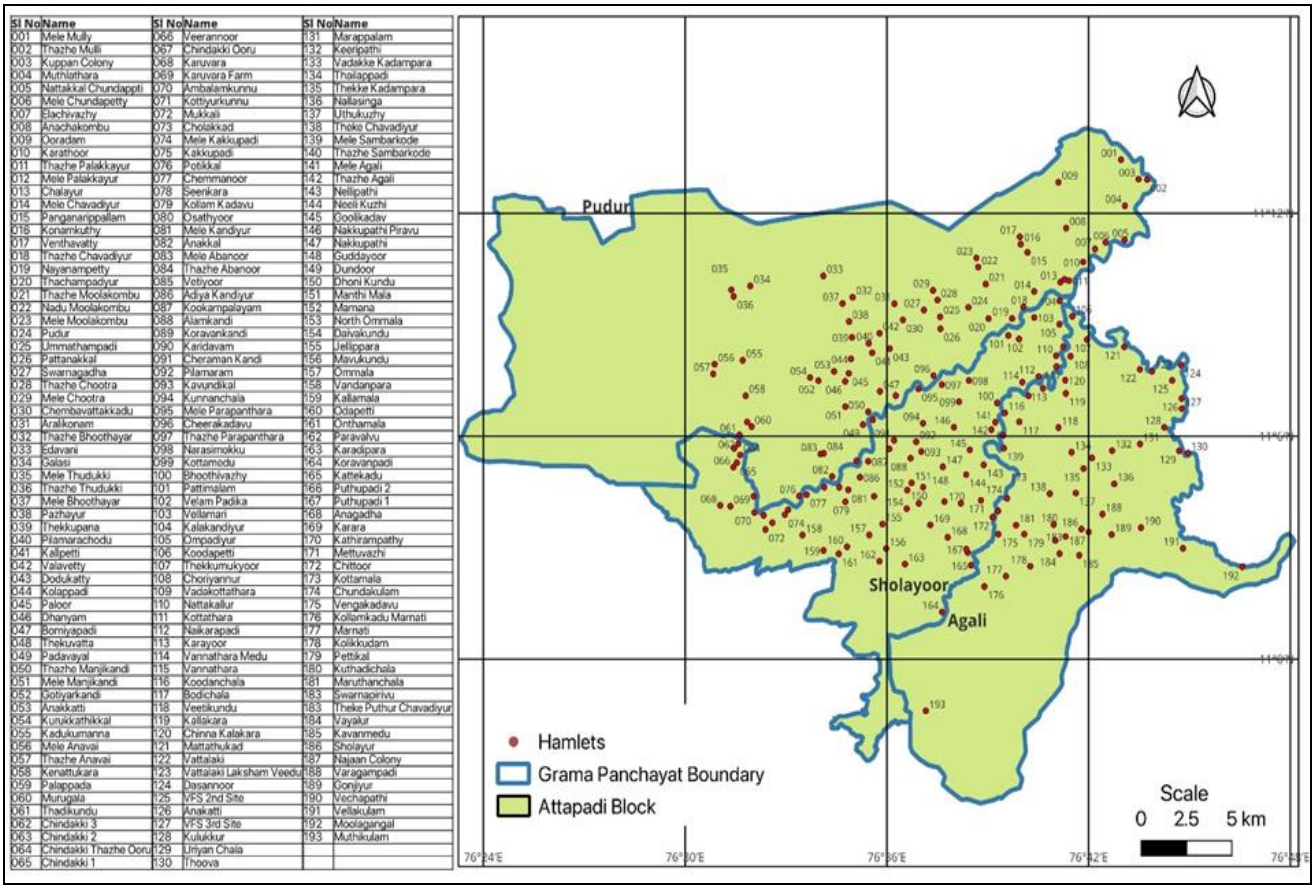

Fig 1: Map showing the study area

2.3 Sampling and data collection

The case study (Yin, 2018) [16], employed an exploratory research design (Stebbins, 2001) [12] and identified 200 respondent producers using key informant technique (Tremblay, 1957) [15] and snowball sampling (Parker, 2019) [9]. The sample comprised traditional goat keepers who reared Attapady Black goats in Attapady through extensive rearing systems and who possessed traditional knowledge of the production system. Data were collected through focus group discussions and personal interviews from 27 November 2023 to 23 October 2024. A checklist of questions on key producer attributes was developed, based on the conceptual framework of GI value chains (Larson, 2007) [7], to elicit responses. The final sample included 10 focus groups with 75 participants and 125 direct interviews, yielding a total of 200 respondents. Multiple methods, including thematic analysis (Braun and Clarke, 2006) [3] of respondent narratives, observation, and literature review, and GIS applications such as Open Data Kit (ODK-Collect v2022.3.1) and QGIS 3.34.4, were employed to identify indigenous producers and manage demographic data of tribal goat keepers. During in situ interviews in the hamlets, the application captured multiple respondent attributes, including georeferenced location, name, photograph, and the number of Attapady Black goats owned. Responses to open-ended questions provided insights into the key attributes and demographics of producer-actors, including gender, age, landholding, household goat holdings, and traditional knowledge related to the Attapady Black goat production system. Location data for 193 tribal hamlets were collected through both primary sources (direct visits) and secondary sources (Integrated Tribal Development Project, Attapady), which were subsequently used for mapping the tribal hamlets of Attapady.

3. Results and Discussions

Figure 2 shows that women dominated among producers (64%). Figure 3 indicated that most producers were over 46 years (45%), followed by 31-45 years (38%) and 21-30 years (17%).

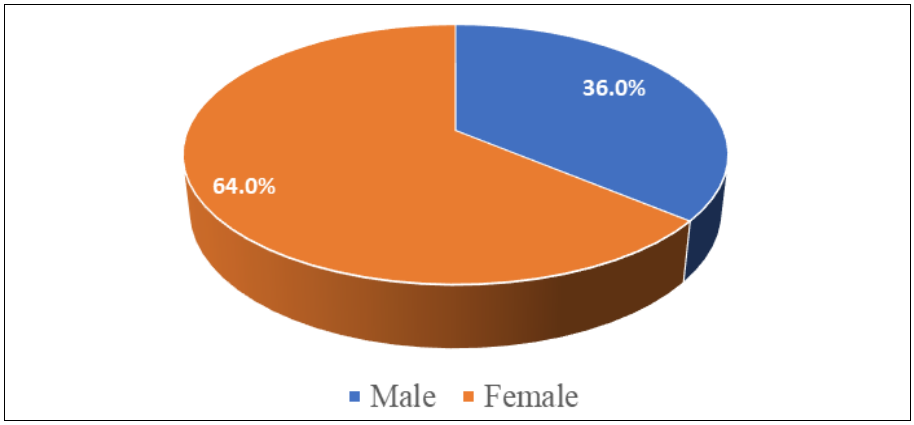

Fig 2: Distribution of producers based on gender

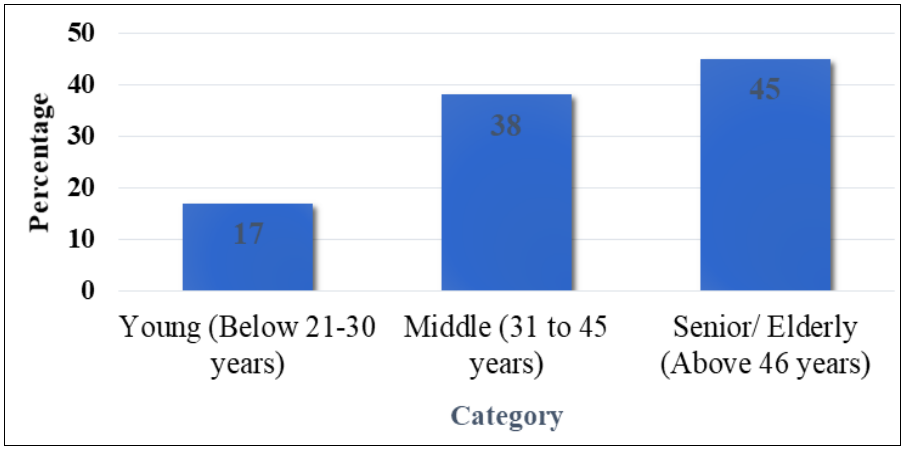

Fig 3: Distribution of producers based on age

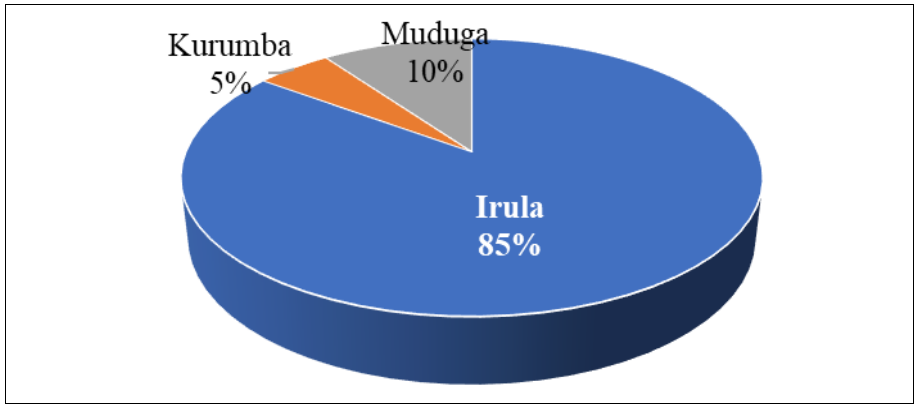

Fig 4: Distribution of producers based on ethnic groups

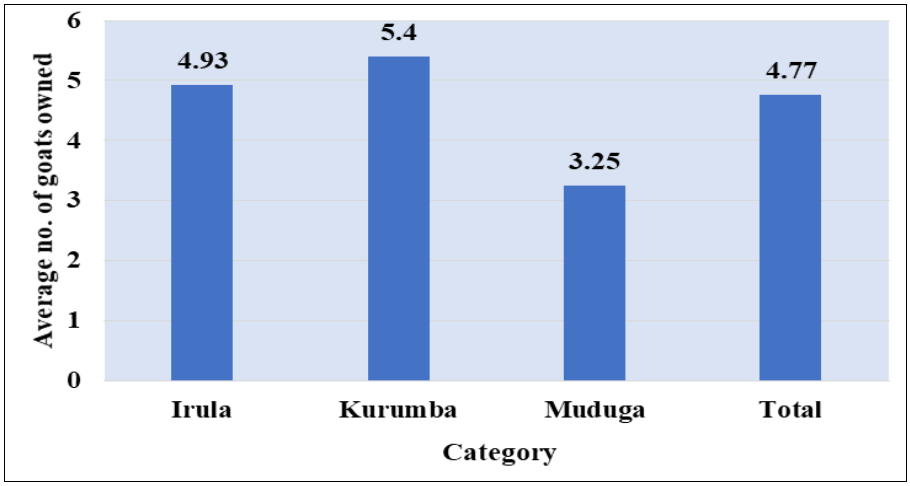

Fig 5: Descriptive statistics of goat ownership among ethnic producer groups

As shown in Figure 4, the Irula community formed the majority (85%) of producers followed by Muduga (10%) and Kurumba (5%). Goat holdings ranged from 0 to 27 per household, averaging 4.77 goats (Figure 5), consistent with Aslam *et al.* (2012) who reported 3-5 goats per household among tribal keepers. It has been reported that the ethnic communities of Attapady comprise 44 percent of the population across 193 hamlets, including the Irula (26,536 people in 147 hamlets), Muduga (4,012 people in 27 hamlets), and Kurumba (2,813 people in 19 hamlets), (ITDP, 2024) [6]. Figure 6 shows that 90 per cent of producers sold goats within hamlets, and only 10 per cent local markets. Reasons for sales (Figure 7) included economic need (91%), seasonal demand (56%), and rituals or cultural events (48.5%). Most producers preferred intermediaries (79%) for marketing the goats, while 13 per cent used both intermediaries and direct sales, and only 8 per cent relied solely on direct sales (Figure 8).

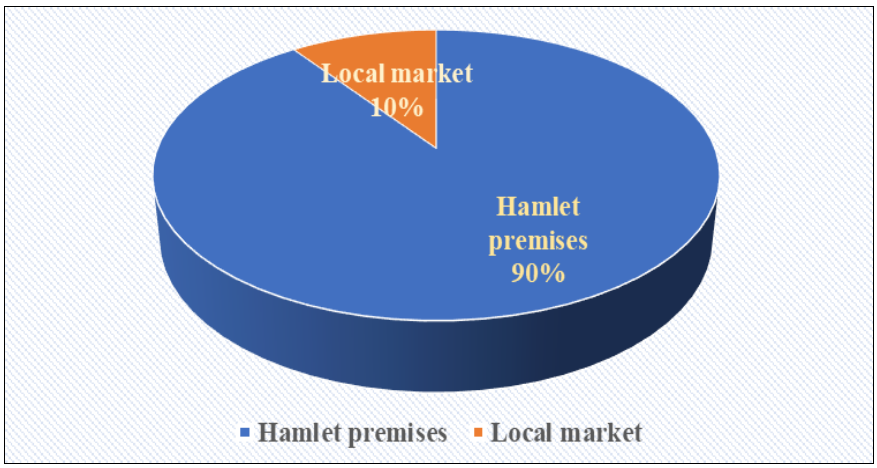

Fig 6: Distribution of producers based on location of transaction of goats

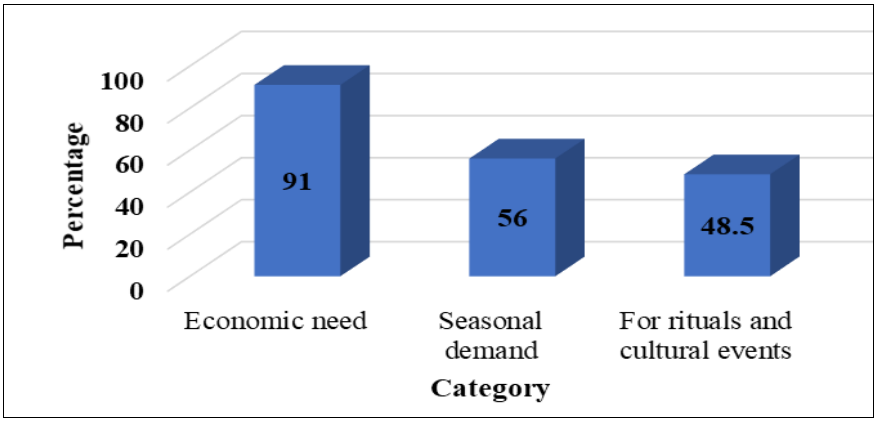

Fig 7: Distribution of producers based on reason for selling goats

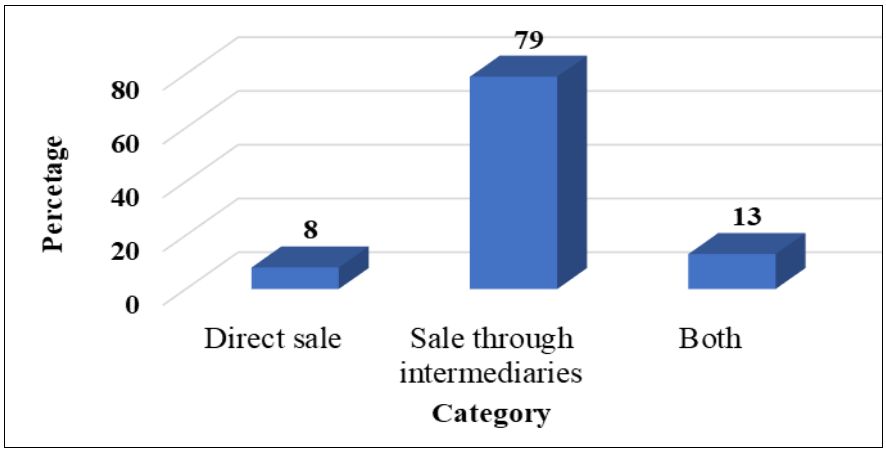

Fig 8: Distribution of respondents based on preferred marketing channel

Table 1 summarizes the local knowledge and traditional practices associated with the production system documented in the study. The thematic analysis of respondent narratives from focus group discussions and personal interviews revealed that the traditional producers of the Attapady Black goat were found to play a crucial role as custodians of breed purity, applying indigenous technical knowledge, maintaining traditional rearing and healing practices, conserving local biodiversity, and safeguarding the reputation and integrity of the production system, also reported by Thomas *et al.* (2021) [14].

Table 1: Indigenous knowledge and practices

Traditional rearing practices	
1.	Goats reared on low/ zero input extensive rearing system
2.	Goats were sustained on natural grazing without concentrate feed
3.	Producers depended on forests for daily grazing the goats
4.	Forest grazing averaged 5 to 9 hours a day
5	Goats were housed overnight in sheds at the hamlets, with minimal feeding
6.	Diet varied: with fresh herbs in rains, dry shrubs and leaves in summer
7.	Water sourced from perennial rivers and forest streams
8.	Sheds were kaccha, built with bamboo, wood, thatch, and mud; a few were semi-pucca with stone, bamboo, or asbestos
9.	Natural breeding of goats, with mating managed through experience
Traditional healing practices	
10.	Herbal pastes made from plants like *Keezharnelli* and *Kolakatta* combined with Black goat milk and *Poomparuthi* to goat urine, to treat diseases like jaundice (Sinha, 1991) [11]
11.	Herbal mixture using bark of trees like *Ellappala* and *Kolakkatta danchi* used with milk of black goat, for external application or oral consumption for curing headache (Sinha, 1991) [11]
12.	Goat milk applied externally to treat eye infections (Padmanabhan and Sujana, 2008; Hazarika *et al*., 2018) [8, 5]

Indigenous knowledge has been pivotal in sustaining the Attapady Black goat production system, especially through extensive rearing and natural breeding practices. Local producers reared these goats under low/zero-input extensive grazing systems, relying on the forests of Attapady hills, the native tract of the breed (Stephen *et al.*, 2005; Aggarwal *et al*., 2006; Radhika *et al*., 2012) [13, 1, 10].

4. Conclusion

The indigenous producers are central to sustaining the Attapady Black goat production system, ensuring breed purity, conserving biodiversity, and applying indigenous knowledge. Women predominated among goat producers, most of whom were older adults. The Irula community formed the majority with Muduga and Kurumba also represented. Producers typically sold goats within their hamlets, driven by economic, seasonal, or cultural reasons, and primarily relied on intermediaries for marketing. Traditional practices included extensive low-input rearing, grazing in forests, natural breeding, using locally constructed overnight shelters, and ethno-veterinary care with medicinal plants. Goat milk was primarily for feeding kids and for herbal remedies to treat ailments such as jaundice, urinary tract infections, respiratory problems, eye infections, and parasitic infestations. These findings highlight the pivotal role of traditional producers as custodians of both the breed and associated indigenous knowledge.

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Conflict of Interest

The authors have no conflict of interest to declare

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Not available

Reference

1. Aggarwal RA, Dixit SP, Verma NK, Mathew S, Kumar D, Ahlawat SP, *et al*. Genetic Diversity in Attappady breed of Indian goat as analyzed with Microsatellite markers. Korean Journal of Genetics. 2006;28(3).
2. Aslam MK, Mathew J, Saseendran PC, Rajkamal PJ, Mohan SK. Effect of management intervention on livestock production in tribal households of Attappady. Animal Science Reporter. 2012;6(4):151-155.
3. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative research in psychology. 2006 Jan 1;3(2):77-101.
4. Glaser BG and Strauss A. The Discovery of Grounded Theory: Strategies for Qualitative Research. Aldine Publishing Company, Chicago, 1967, p. 271.
5. Hazarika S, Das S, Sarma H, Sharma HK. Application of Cow and Goat Urine in Traditional Systems of Medicines: A Brief. Int. J. of Pharmaceutical and Biological Archives. 2018;9(4):197-203.
6. ITDP [Integrated Tribal Development Project]. Status report on tribal development and natural resource use in Attapady region. Integrated Tribal Development Project, Agali; 2024.
7. Larson J. Relevance of geographical indications and designations of origin for the sustainable use of genetic resources. Global Facilitation Unit for Underutilized Species (GFU), Geographical indications, biodiversity and development, Rome; 2007, p. 95.
8. Padmanabhan P, Sujana KA. Animal products in traditional medicine from Attappady hills of Western Ghats. Indian Journal of Traditional Knowledge. 2008;7(2):326-329.
9. Parker C, Scott S, Geddes A. Snowball sampling. SAGE research methods foundations; 2019 Sep 9.
10. Radhika G, Alex R, Joseph J, Raghavan KC, Ajithkumar S. Genetic and environmental factors affecting incidence of floppy kids in native and crossbred goats of Kerala. F1000Research; 2012 Aug 24, p. 3.
11. Sinha S. Tribal Thought and Culture: Essays in Honour of Surajit Chandra Sinha. Concept Publishing Company; 1991.
12. Stebbins RA. Exploratory research in the social sciences. Sage; 2001 May 14.
13. Stephen M, Raja TV, Sosamma I. Survey and characterization of Attappady Black goats of Kerala, India. Animal Genetic Resources/Resources génétiques animales/Recursos genéticos animales. 2005 Apr;37:43-52.

14. Thomas M, Radhika G, Aravindakshan TV, Thirupathy R, Raji K, Shynu M. Genome-wide scan for selection signatures for litter size in goat breeds of Kerala. Indian Journal of Small Ruminants (The). 2021;27(1):11-18.
15. Tremblay MA. The key informant technique: A nonethnographic application. American anthropologist. 1957 Aug 1;59(4):688-701.
16. Yin RK. Case study research: Design and methods. 6th Ed., Vol.5, Sage Publications, Los Angeles; 2018, p. 319.

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