

Survey of Disease Incidence In Goats In Muna Regency, Indonesia

Achmad Selamat Aku*, Takdir Sali, Yamin Yaddi, Musram Abadi, La Ode Muh Munadi
Faculty of Animal Science, Halu Oleo University, Kendari, Southeast Sulawesi, Indonesia

ABSTRACT

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The incidence of disease in goat cattle is still a major obstacle in increasing production and productivity products. Prevention and control are still carried out through various programs and medical measures by regional authorities. As an effort to support the program, surveillance of disease events is needed to facilitate the technical implementation of control and prevention. This research was conducted in 50 villages spread across 22 sub-districts of the scope of the muna regency administrative area as a livestock base in Southeast Sulawesi. Kacang goat is the most widely cultivated breed of goat cattle by breeders in Muna Regency. The study used questioner survey methods to obtain detailed information about cases of goat herd disease. Determination of the location of purposive sampling in the village area contained in each sub-district which is then the data obtained is analyzed descriptively. This study focused on the disease in goats by conducting interviews with 124 respondents as breeders. The results of this study showed that there are 3 types of diseases that are most commonly found, namely helminthiasis (24.19%), dermatitis (20.16%) and tympani (11.29%). Helminthiasis is the disease with the highest spread, while tympani with the lowest spread. Pattern and maintenance management are still the main contributing factors to the high spread of the disease. The role of the government both in preventive and treatment measures and socialization of the implementation of effective and efficient livestock maintenance management, especially kacang goats, can be a plus for farmers.

Keywords: Disease surveillance, Kacang Goat, Muna Regency

I. INTRODUCTION

The development of the livestock sector can be done through the optimization of each sector both production and processing. Meat is the main product of the livestock sector besides milk and eggs. In addition to beef, goat meat also provides a considerable contribution in meeting national needs.

The fulfillment of these needs is inseparable from the optimization of production in cultivation. The obstacle faced by goat farmers is the high incidence of diseases both infectious and non-infectious. Goats are small ruminant cattle that are widely maintained by farmers/ranchers in rural areas with various purposes, including as savings that can be sold for living purposes [1];[2]. Java island is currently still the

center of goat cattle population in Indonesia which reaches 50% of the total national population [3];[4]. Goat have economic value for farmers because they are easy to maintain, do not require large land, various sources of feed are available in the countryside, reproductive power is quite high, and the length of maintenance until adulthood is relatively fast [5];[6]. Contributions in the national provision of meat although still relatively low, but have the potential in the future to support food security of livestock origin [7];[8];[9].

Muna Regency as one of the centers of livestock development in Southeast Sulawesi is a region with a fairly high population of goat. The current constraints of goat farming are the limited availability of seedlings [7], as well as the high incidence of disease [10];[11]. The condition is also experienced by kacang goat farmers in Muna Regency. The challenge of production stemming from the high incidence of disease is felt in breeders with maintenance patterns that are still extensive and semi-intensive. The spread of the disease is very fast because of direct contact between individuals in one group or between groups. The application of health management is also still very limited because the scale of livestock ownership is still relatively low. Goat in this region are still cultivated as a source of side income. Livestock health management in the form of prevention and prevention of disease in small scale is carried out if the situation and conditions demand that the action be taken [12].

Livestock health became important because it led to decreased productivity due to growth barriers, reproductive impairment, feed efficiency, and

mortality. [13] Preventive measures taken by goat farmers are carried out only against diseases that are repeated [14]. The types of diseases most commonly found on goat farms are tympani, helminthiasis, pink eyes, and dermatitis The disease that is carried out by goat farmers in Muna Regency is still traditional by expecting hereditary understanding.

II. METHODS AND MATERIAL

The study was conducted in Muna Regency in January-March 2021 with survey methods and interviews with 124 respondents to kacang goat farmers. The location of the study was determined by purposive sampling in 22 sub-districts with one to five villages with the number of respondents consisting of 1-12 breeders. The determination of the number of respondents in each sub-district is based on the population of kacang goat.

III. RESULTS AND DISCUSSION

The results of this study showed there were three dominant diseases found in goat cattle in Muna Regency (Table 1). The highest incidence of the disease was helminthiasis with 30 cases (24.19%) and dermatitis and tympani of 25 (20.16%) and 14 (11.29%) cases, respectively. Helminthiasis is found in 10 sub-districts, dermatitis in 7 sub-districts and tympani in 5 sub-districts. Geographically the incidence rate of each disease is influenced by the location of the land area, the pattern of intensive maintenance allows direct contact between livestock from different sub-districts.

Table 1. Kacang Goat Disease in Muna Regency

No.	Research Location	Respondents	Village	Types of Diseases		
				Helmintiasis	Dermatitis	Tympani
1	Batukara	12	4	5	0	0
2	Pasikolaga	7	3	0	0	6
3	South Wakorumba	3	1	1	0	2
4	Maligano	3	1	0	0	1
5	Pasir Putih	4	2	4	4	0
6	Marobo	7	1	4	4	0
7	Bone	6	2	4	4	0
8	Parigi	5	5	0	0	0
9	Katobu	3	1	1	0	0
10	Duruka	5	2	0	0	1
11	Lohia	11	3	3	0	4
12	South Tongkuno	5	2	0	0	0
13	Tongkuno	5	2	0	0	0
14	Batalaiworu	2	2	0	0	0
15	Lasalepa	3	1	3	3	0
16	Napabalo	3	1	3	3	0
17	Towea	2	2	0	0	0
18	Kabawo	10	4	2	4	0
19	Kontukowuna	9	3	0	0	0
20	Kabangka	6	2	0	0	0
21	Kontunaga	5	2	0	0	0
22	watoputeh	8	4	0	3	0
Muna Regency		124	50	30	25	14

Source: Research Survey Results, 2021

susceptibility of livestock to the causative agents of helmintiais are gender, age and climate.

1.1 Helmintiasis

The highest incidence of helmintiasis occurred in Batukara, Pasir Putih, Marobo and Bone districts. Transmission of disease agents can occur through feed contaminated by worm eggs or invective larvae from the agent. Worm infections in goats are derived from the strongyle sp species, Strongyloides sp. Haemonchus spp., Bunostomum spp., Trichostrongilus spp., Cooperia sp, Trichuris sp, Fasciola sp and Moniezia sp. Based on reports from breeders that the incidence of helmintiasis is widely found in adolescent cattle. factors that affect the

1.2 Dermatitis

Dermatitis is a chronic and recidivist skin inflammation characterized by skin disorders in the form of itchy papules, which then undergo exoriation and likenification, their distribution in the folds (flexural) of the body. Skin disorders in goats can be caused by parasites, fungal, viral or physiological fungus of the body (hypersensitiveity). Parasitic infections (scabies) and viruses (orf) are the main causes of dermatitis due to its rapid spread. This disease is found in 7 sub-districts with thesame

incidence rate. The pattern of raising goat cattle in Muna district is the main cause of the high spread of scabies and orf disease. Scabies is an ectoparasitic disease that attacks the skin parts of ruminant farm animals (goats, sheep, cows) [28]. Scabies mainly attack goats and rabbits, and can be transmitted to humans (zoonotic). This disease is caused by sarcoptes scabiei mites that are obligate on their host by making tunnels at the bottom of the skin so that hair loss occurs. Generally the parts of the body that are attacked are the area around the face, ears, lower chest, abdomen, tail, along the back, neck, and legs [32];[33]. The skin part exposed to scabies will harden, thicken and fold [34].

Dermatitis due to viral infection (orf) is an infectious skin disease caused by the parapox virus. The infection is acute with an incubation period of 2-3 days so the number of transmissions relatively fast. Clinical symptoms of orf are lesions on the skin around the lips/mouth, especially in the corners of the lips. Transmission of orf through direct contact between infected animals and sensitive animals and not directly through materials/tools or environments contaminated with the virus.

1.3 Tympani

Tympani (bloat) occurs due to excess gas buildup in the gastrointestinal, especially in the stomach so that there is a non-infectious systemic disorder. The incidence of this disease was found in 5 sub-districts with Pasikolaga District with the highest incidence. Disease is a physiological impact due to impaired mechanisms of estructation and the rate of gas production exceeds the ability of animals to excrete them. Tympani is classified into a primary bloat (frothy/wet bloat) in the form of persistent foam mixed with the contents of the rumen and bloat secondary/tympani bloat (freegas/dry bloat) in the form of a separate free gas. The cause of bloating is a failure of gas expenditure because the digestive tract is closed [35]. Tympani can be stimulated due to

young forage, wet grass and eating too many pods[36]. Symptoms experienced in the form of restless cattle, bulging upper left abdomen, pain while breathing, scavenging the stomach, and decreased appetite [37]. The handling is to keep the cattle in a standing position, holding the mouth with wood to keep it open to help the gas out of the mouth.

IV. CONCLUSION

The pattern of raising goat in Muna Regency is extensive and semi-intensive. The condition is still the main source of the incidence of both infectious and non-infectious diseases. Helminthiasis and dermatitis are the most commonly found infectious diseases, while they are not for non-infectious disorders. In general, the handling of livestock disease in Muna Regency has not received serious treatment because of the limited understanding of breeders and the limitations of medical personnel. Handling efforts can be optimized by intensifying counseling on the handling of diseases, especially kacang goats so that cases of livestock disease get treatment early. The livestock disease will indirectly affect the economic value of livestock and harm the farmers themselves.

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