

ANALYSIS OF THE LEVEL OF KNOWLEDGE, SKILLS AND ATTITUDE OF FARMERS IN HANDLING SCABIES IN GOAT FARMING IN THE MAJENE DISTRICT

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ABSTRACT

One disease that often occurs in goats is mange. Scabies is an ectoparasitic skin disease caused by *Sarcoptes scabiei*. This study aims to determine the level of knowledge, skills, and attitudes of breeders in handling scabies in goats in Majene Regency. The sampling method uses a non-probability sampling method, namely a sampling technique that does not provide equal opportunities for each element or member of the population to be selected as a sample. The sampling technique used was purposive sampling. The population in this study consisted of goat breeders in Tubo Sendana District and Banggae District, Majene Regency with a population of 583 breeders and a sample size of 85 people. The results of the study showed that the highest percentage of goat breeders' knowledge regarding scabies management was in the medium criteria, namely 55.3%, the highest percentage of breeders' skills was in the medium criteria, namely 50.6% and the highest percentage in the breeders' attitude category was in the medium criteria, namely 48.2%.

Keywords: ectoparasite, knowledge, *Sarcoptes scabiei*, scabies, skill

INTRODUCTION

Livestock is an agricultural subsector with excellent development opportunities. Because of the population, the community's need for livestock products increases yearly. Livestock's production of protein, energy, vitamins, and minerals is growing along with the increasing public awareness of nutritional needs to improve the quality of life (McGrath *et al.*, 2018). One livestock business that promises community benefits is goat farming (Maesya dan Rusdiana, 2018).

Goats are small ruminant livestock. The characteristics of goats are having a beard, a tail curved upwards, coarse and straight hair, and a convex forehead. The population of goats in Indonesia is relatively high and is in demand by the public, such as in Majene Regency, with as many as 77,194 heads (BPS, 2024).

Goats have the possibility of being exposed to various diseases. One of the diseases that often occur in goats is scabies. Scabies is an ectoparasitic skin disease caused by *Sarcoptes scabiei* (Anugrah *et al.*, 2021). Breeders rely only on traditional farming methods and culture passed down from generation to generation in their farming process. Local farmers carry out traditional farming, as with farms in the Majene

Regency. Based on data from the Department of Agriculture, Livestock, and Plantation, Majene Regency, 40 cases of scabies were recorded in goats in 2020, which will increase to 71 cases in 2021.

Scabies are a parasitic disease affecting livestock growth and reducing economic value. Scabies disease can attack large or small livestock such as buffalo, rabbits, and goats (Guillot *et al.*, 2023). This disease has a different attack predilection in these livestock. Once the infection is established, the parasite survives in the body of the host by eating body tissue, taking the nutrients it needs, and sucking the blood of the host (Challaton *et al.*, 2022; Moroni *et al.*, 2022). The body weight will decrease due to reduced grazing and ruminant activities. This causes a decrease in body weight, slow growth, reduced body resistance, and death of the host (Thomas *et al.*, 2020).

One inhibiting factor that causes goats' low productivity is the lack of farmers' knowledge of animal health. Poor animal health will trigger various diseases in livestock and cause economic losses in the form of death, decreased production, reproductive efficiency, increased medical costs, and so on. Often,

farmers do not know the extent of the danger of a disease or how to prevent it (Sadiq *et al.*, 2021). Knowledge of diseases in livestock, especially from clinical aspects such as clinical symptoms, digging up information from anamnesis, observation, and physical examination, will significantly help farmers protect their livestock from disease (Widyastuti *et al.*, 2017). One of the causes of the emergence of ectoparasites in the livestock environment could be the lack of knowledge farmers have about raising goats (Ali *et al.*, 2012). Skills in dealing with disease are necessary in livestock health management. Livestock health

management is needed to prevent various diseases that can harm livestock through various actions, including maintaining hygiene, sanitation, and feed management and providing supplements and medicines to increase livestock immunity (Lestari *et al.*, 2019). Knowledge about the management, prevention, and handling of scabies must be addressed well by farmers because, in the end, it will affect the economic value of a livestock business. These conditions became the basis for researchers to examine the level of knowledge and skills of farmers in handling scabies in the Majene Regency.

METHODS

Site and time

This research was conducted in September-November 2021 in Majene Regency. The study was conducted in two sub-districts: Tubo Sendana District and Banggae District. The location selection was made purposively based on specific considerations, where these two sub-districts had a higher level of scabies disease in goats than other sub-districts and adapted to the research objectives.

Research Types And Samples

The type of research used is descriptive quantitative research. The population in this study consisted of goat breeders from Tubo Sendana and Banggae Districts. Majene

Regency with a population of 583 breeders with a total sample of 85 people

Data Collection

The sampling method in this research uses a non-probability sampling method, namely purposive sampling with data collection techniques using the survey method, with the help of a questionnaire as a research instrument; in the instrument, a structured list of open-ended questions was created.

Data Analysis

Data processing uses tabulation, creating tables containing data coded according to the required analysis. The analytical technique used is descriptive percentage analysis.

RESULTS AND DISCUSSION

Knowledge

Research on the level of knowledge of farmers in handling scabies disease in goats with

85 respondents in Majene Regency obtained results that can be seen in the following table:

Table 1. Percentage of farmer knowledge level score

Criteria	Interval	Frequency	Percentage (%)
Very High	84 – 100	3	3.5%
High	67 – 83	32	37.6%
Medium	50 – 66	47	55.3%
Low	33 – 49	3	3.5%
Very Low	16 – 32	0	0%
Total		85	100%

Table 1 shows the percentage of knowledge farmers have of handling scabies disease in goats. It can be seen that the very high

criteria of 3.5% with a frequency of 3, high criteria of 37.6% with a frequency of 32, medium criteria of 55.3% with a frequency of

47, low criteria of 3.5% with a frequency of 30. This percentage is influenced by several factors: experience raising livestock, education, and information obtained from veterinarians and local animal husbandry. According to Kusnaini (2021), Knowledge is a learning process influenced by various internal factors, such as motivation, and external factors, such as available information facilities and socio-cultural conditions. Education level affects farmers' adaptation and innovation in raising livestock. In addition, each farmer's experience in raising livestock varies; most farmers have different experiences (Hansen *et al.*, 2023).

Low criteria that give the highest value through questions about administering scabies medication to livestock. Respondents do not know about the administration of medications for scabies because they usually still use traditional drugs. This is influenced by factors from traditions and habits from generation to generation so that what was done by the previous generation is still carried over or used today. According Novita *et al.* (2018), the culture that a person adheres to is because many people often practice habits and traditions without reasoning whether it is good or bad, so one's knowledge will increase even though they do not.

The medium criteria, that give the highest value through questions about discuss the transmission of scabies disease and the symptoms of scabies disease. Respondents do not know about the transmission and symptoms occurring in livestock and humans. Transmission to livestock can occur if sanitation is not paid attention to, and there is also direct contact from livestock with scabies disease. Symptoms of scabies: cattle infected with scabies look restless because of the itching and rub their bodies on rough surfaces such as cages or trees, causing wounds and bleeding (Richards, 2021). Respondents do not understand the incubation period of scabies disease, where it is essential to know livestock that experience early symptoms of scabies disease. Limited information can affect a person's level of knowledge, according to Wiryany *et al.* (2022), which states that increasingly advanced technological developments significantly affect each individual's knowledge level.

The highest value on the high criteria, which discusses the impact of scabies disease. Breeders already know that the effects of cattle

exposure to scabies disease will occur in the fur that looks dull and sheds, itching on the skin accompanied by rashes and thickening of the skin even at the severity level, and the cattle's skin will peel. Factors that can affect the level of knowledge of respondents, namely experience. According to Sirat *et al.* (2021), individuals who experience events or incidents when interacting with the environment are called experiences. Experience is a way to obtain the truth by repeating knowledge to solve problems experienced in the past.

Respondents' understanding of livestock losses when exposed to a particular disease of scabies is influenced by the age of the breeder himself. According to Sirat *et al.* (2021), an individual's capture power and mindset are influenced by their age; the older a person is, the more his capture power and mindset will develop so that the knowledge will increase. The older a person is, the better his mental development will be.

The highest score for the very high criterion that give the highest value through questions about loss of farmer mortality. Some respondents understand that scabies disease can cause death and impact the farmer's economy. One factor that can affect a person's level of knowledge is education. According to Taufik dan Pratama (2022), education can affect a person's level of expertise. The higher the education a person has taken, the higher the information obtained, so it is hoped that more knowledge will be obtained.

Skills

Skills in dealing with diseases that attack livestock and general health management methods support achieving optimal and profitable production.

Table 2 shows the percentage of farmer skills when dealing with scabies in goats. It can be seen that the high criteria are 25.9% with a frequency of 22, the medium criteria are 50.6% with a frequency of 43, the low criteria are 23.5% with a frequency of 20, and the very low criteria are 0% with frequency 0. This illustrates that with knowledge in the category being reflected, the breeder's skills are in the medium category, too. According to Fitriani *et al.* (2018), skills are a combination of specific skills created as a source of business and have a mutually supportive relationship between one another types of skills with other skills. General breeder

skills come from experience during farming. The characteristics of the breeder's skills (age, level of education, years of farming, and

experience) can influence these breeders in making decisions that can benefit the livestock business.

Table 2. Percentage of farmer skills level score

Criteria	Interval	Frequency	Percentage (%)
Very High	84 – 100	0	0%
High	67 – 83	22	25.9%
Medium	50 – 66	43	50.6%
Low	33 – 49	20	23.5%
Very Low	16 – 32	0	0%
Total		85	100%

The criteria for low skills, that give the highest value through questions about regarding skills in preventing scabies transmission. Respondents did not know about scabies prevention because biosecurity had not been implemented. To reduce the prevalence of scabies transmission, strict biosecurity measures combined with vaccines and nutritional interventions are necessary (Vlasova dan Saif, 2021).

The medium skill criteria about some respondents did not understand that if there were goats with scabies mixed with healthy livestock in one pen, it would spread to the entire livestock. Apart from that, respondents did not understand the procedures for treating and controlling scabies in goats. Respondents did not understand the types of medicines to treat scabies in goats. According to Yadav et al. (2024), health management is one of the most essential aspects of all goat farming business activities. Maintaining livestock health includes inspection, prevention, control, and treatment (Taufik dan Pratama, 2022). Added that the therapy given to the case goat was the administration of anti-scabies medication subcutaneously or intramuscularly given twice with an interval of 14 days, topical treatment by applying it to infected skin (Richards, 2021).

The highest skill criterion explains that respondent farmers were greatly helped by efforts to train livestock health, according to Mulyanto dan Garside (2022), by providing counseling and skills training to breeders to help breeders to increase their income further. Another thing that strengthens the research location is that the cage gets lots of sunlight, thus preventing the cage from becoming damp because a damp place can cause the mites to survive for more than 30 days. According to Taufik dan Pratama (2022) to avoid the risk of increasing scabies in livestock, take action regarding health supervision, handling cages, prevention, treatment, maintaining environmental cleanliness, and production equipment. In general, these actions must be carried out by the breeder's ability to recognize the environment and the mechanism of transmission of scabies.

Attitude

This attitude creates feelings and encouragement that by implementing biosecurity measures and carrying out good livestock health management, the expected livestock productivity will be achieved. Table 3 shows the results of assessing breeders' attitudes regarding scabies in goats.

Table 3. Percentage of farmer attitude level score

Criteria	Interval	Frequency	Percentage (%)
Very High	84 – 100	2	2.4%
High	67 – 83	23	27.1%
Medium	50 – 66	41	48.2%
Low	33 – 49	19	22.3%
Very Low	16 – 32	0	0%
Total		85	100%

Table 3 shows the percentage of farmers' attitudes towards scabies in goats. It can

be seen that the very high criteria are 2.4% with a frequency of 2, the high criteria are 27.1%

with a frequency of 23, the medium criteria are 48.2% with a frequency of 41 and the low criteria are 22.3% with a frequency of 19. Attitude is a component that forms human behavior as well as knowledge and skills, so these components influence each other. The highest frequency of attitudes of respondent farmers is in the medium category, which shows that the handling and prevention of scabies in the Majene district still needs to be improved. The supporting theory in the research of Pratiwi (2020) states that there are several main things in attitude, namely beliefs, ideas, concepts, emotional life, evaluation of an object, and tendency to act, these things together form the attitude of a breeder as a whole. In determining this complete attitude, knowledge, thoughts, beliefs, and emotions play an important role.

The low criteria for attitude, that give the highest value through questions about regarding attitudes regarding scabies transmission. Respondents were not responsive in recognizing scabies, especially the symptoms that resulted, such as livestock being restless due to itching and often rubbing their bodies against the walls of the cage, resulting in peeling skin. Rokip *et al.* (2020) stated that Scabies are caused by mites that infect by infesting the host's skin and moving under the layers of skin (Stratum corneum and lucidum) causing itching, hair loss, and skin damage.

The medium skill criteria, explains that some respondents understood that scabies had a direct impact on the economic side of the goat farming business being run, as explained by Gafar *et al.* (2024) that the impact of scabies

causes decreased body weight, slow growth, decreased body resistance, and death of the host. Livestock infected with parasites usually experience emaciation so they have a low selling value. The attitudes shown by respondents are in line with what Fitriani *et al.* (2020) said about attitudes describing relatively consistent evaluations, feelings, and tendencies of a person towards an object or idea.

The criteria for high and very high attitudes were obtained from the openness of respondent farmers to receive information and adopt innovations regarding scabies management. Pratiwi (2020) stated that the attitudes and actions of breeders in making decisions are the basis for the limited theoretical knowledge of breeders. Attitude is also the willingness of a person/breeder to act. Fitriani *et al.* (2020) added that attitudes play an important role in the theory of human behavior as an important link between what someone thinks and what they do.

Information and knowledge about the management, prevention, and treatment of scabies obtained by breeders generally come from outreach and mass media. This is the opinion of Brennan *et al.* (2016) who stated that the role of instructors and livestock health technical personnel have a role in changing farmers' attitudes toward livestock health and welfare factors. Added by Pratiwi (2020) that the application of information is an attitude that is formed starting from personal experience, the influence of other people, culture, and mass media.

CONCLUSIONS

The highest knowledge of goat breeders is in the medium criteria, with 55.3% especially knowledge about transmission and symptoms of scabies, the breeder's skills are in the medium criteria, namely 50.6% about skills in terms of treatment methods and initial handling of livestock infected with scabies, and the breeder's

attitude is in the medium criteria, namely 48.2% about in terms of addressing the economic impact caused by scabies. This shows that the level of knowledge, skills and attitude of farmers influences scabies management in goat farming in the Majene District.

SUGGESTION

The government should routinely provide counseling and training to livestock farmers regarding the impact of scabies and the treatment that must be carried out if livestock

suffers from scabies so that the level of knowledge and skills regarding scabies can increase.

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