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The Impact of Raising Cows and Buffaloes Inside the House toward Human Health

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Abstract

Indonesia is a country that has great potential in the field of animal husbandry which is very important as a support for the supply of animal protein derived from livestock. Cows and Buffaloes are livestock that have economic potential, diseased livestock have a very negative impact on humans. Diseases in livestock can be transmitted quickly and can be fatal, namely death. These diseases can arise caused by bacteria, viruses, fungi, and parasites. It turns out that cows disease is also experienced by pre-weaning calves, health problems caused by two factors, namely infectious factors include bacteria, viruses, protozoa, and parasites, as well as non-infectious factors in the form of management and environmental factors. Health problems that often occur are diarrhea, umbilical cord infections, bloating, intestinal worms, and pneumonia. Infectious diseases that can be transmitted from livestock to humans are so many, but still relatively little is known by the general public, so when one of the infectious diseases of livestock occurs in the community what happens is not the proper attitude and action but panic and worries that spread . Knowledge about diseases transmitted by livestock, symptoms, and appropriate prevention and treatment is still limited. The purpose of this study is to analyze the relationship between risk factors and health effects of raising cows and buffaloes in the house with various diseases that arise in Jraganan Village, Bodeh District, Pemalang Regency. This research is an observational analytic study with cross-sectional approach. The selected population is all residents of Jraganan Village who maintain buffaloes and cows in the house. Examples in this study were 51 respondents who included cows and buffalo breeders who kept livestock in the house. The results showed that there was a significant relationship between farmers raising cows and buffaloes in the house with contracting livestock diseases such as itching and diarrhea in Jraganan Village, Bodeh District in 2016. Respondents with the risk of contracting the disease were 51 people (53.12%). The results of the study concluded that cage in the house has a higher risk of contracting diseases from livestock to humans, namely skin diseases and diarrhea. Diarrhea and skin diseases in cows, especially cows, are not a disease, but rather are clinical signs or symptoms of a more complex disease that can be caused by various things.

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INTRODUCTION

Indonesia is a country that has great potential in the field of animal husbandry. Indonesia is the country with the highest population in Southeast Asia and has a livestock population density. The impact of climate change is also felt in Indonesia in the form of an increase in environmental temperature ranging from 1-1.5o C which affects the development of parasitic vectors and reservoirs. Livestock are very important as a supporter of the supply of animal protein. Farms in Java, in addition to land that is still narrow as well as family assets forcing people to stay at home. Physiological conditions of livestock have an influence on their reproduction, good reproduction can have an impact on increasing the population of livestock to meet the animal needs of Indonesian people who are still relatively low (Komariyah, 2019). Livestock have long been united with human life. Livestock raising is not only in rural areas, in urban areas many animals are maintained even though in limited numbers. Since the first time cows have been side by side with humans. Humans mostly use livestock as labor, pets, and pets even as experiments for research in laboratories, all of which are of course pointed out for human welfare, but behind that livestock can be a disaster that is as a direct or indirect contagious disease in humans (zoonosis) which can cause unrest in the community even fatal. Recently, it has been reported that Surra disease is often experienced by livestock such as cows and buffaloes with chronic elevation, the malignancy of this disease will increase with mortality rates up to 80% (Sulaeman et al 2019). Calf mortality is also relatively high at 19.59% (Imbang Dwi R, 2014). Livestock disease not only attacks livestock but can also be transmitted to humans is called "ZOONOSIS" disease (WHO, 2010). Zoonoses that occur due to infectious diseases from humans to animals are known as anthroponosis. Zoonotic causative agents include prions (carriers of infectious diseases consisting only of proteins), viruses, bacteria and parasites and microorganisms that mutate across the boundary (specific barrier), (Dani Dharmawan etal , 2014). Zoonotic transmission can be divided into zoonoses originating from zoonotic wildlife originating from animals not maintained but around the house and zoonoses maintained by humans (Khairyah, 2011). The impact of zoonoses is the emergence of morbidity and mortality, economic impacts and restrictions and decline in international trade (Bahri & Safriati, 2011).

Disease agents that can be transmitted to humans or zoonoses consist of 80% viruses, 50% bacteria, 40% fungi, 70% protozoan parasites, 95% worms. The zoonotic protozoan infection was quite high at 70%. Animal diseases that can be transmitted to humans include rabies, tuberculosis bovis (TBC-bovis), brucellosis, salmonellosis, echinococcosis, anthrax, Avian Influenza, toxoplasmosis, Verocytotoxigenic, Escherichia coli (Mathur, 2005). like salmonella infections, E coli infections, and encephalitis. E coli bacterial strain known as O157: H7 is not harmful to livestock, but can cause serious illness and even death in humans (Emilio, 2006). Clinical symptoms which are generally observed by animals experiencing fever, lethargy, reduced appetite, as for animals the chronic pathogenic infection shows anemia, thinness, hair loss, edema around the mandibular os and limbs and will eventually die (Sulaeman et al 2019).

Zoonotic diseases occur in many developing countries, causing high rates of illness and death in humans each year (Holy et al., 2011). Until now, there are no less than 300 animal diseases that can infect humans. In the last twenty years, 75% of new diseases in humans have occurred due to migration of pathogens from human or zoonotic animals, and out of 1,415 pathogenic microorganisms in humans, 61.6% have come from animals, such as immunodeficiency (Widodo, 2008).

Livestock in Indonesia are susceptible to various diseases, including zoonoses. Zoonoses are a new threat to

human health. The development of zoonoses in recent years is a sign of increasing threat of deadly diseases for humans transmitted by animals. Suspected spread can also occur through the wind (Brown, 2004). Zoonoses can be from animals to humans through a number of ways. One of them is transmission through food, a disease contaminated by a disease agent called foodboune disease, so that if the disease agent that is in food is zoonosis. Various health problems above arise from transmission of animal diseases to humans and the containment needs to be known by field officers / extension workers in villages (Suryana, 2006). This situation, in addition to directly affecting the environment, will also increase the occurrence of pathogen exposure to the host and vector exposure to the host, so that it will increase the likelihood of animal diseases (Bahri & Safriati, 2011).

Livestock data in Pemalang district, Bodeh sub-district is the number one district where people keep livestock in one house, precisely in Jraganan village (Forestry and Forestry Service Office, 2016). Based on available data, the population of Jraganan village is 2,381 inhabitants in January 2016 (January results of interviews with village heads on 20 October 2016). The data in 2010 the number of breeders was 113, in 2015 the number of breeders who kept their livestock in one house with a rancher was 184. The table data experienced an increase in 2016 to 254 breeders and this figure has always increased every year (Jraganaan village data, 2016) .

In general, residents of one house with livestock experience various diseases that arise such as itching, scabies, gudig, cough, elephantiasis, diarrhea, and respiratory infections. Hendrik L Blum in 1983 explained, there are four main factors that influence the degree of public health. Living style, environmental factors, health service factors and genetic factors. Human life is also strongly influenced by people's lifestyles (Gunawan, 2009).

Data on the number of illnesses at the Kebandaran Health Center total visits in 2016 in sequence in the top 10 diseases were ISPA (15.3%), Typhus (12.6%), diarrhea (12.2%), skin diseases due to fungi (18.6%), atopic dermatitis (17%), gastritis (2.9%), allergic contact disease (21%), hypertension (3.5%), unidentified influenza virus (14%), rheumatoid arthritis (1, 3%)) people (Data of the top ten diseases in the Bodeh Community Health Center, 2016). The total number of the top 10 disease sufferers is 11,217, of these figures Jraganan villagers are number two with the highest number of illnesses. The total population of livestock in Bodeh sub-district is 1876 while livestock kept in one house is 254 breeders in Jraganan village (village data, 2016).

Animal diseases that are contagious to humans must be watched out by all parties, both government and community. Infectious animal diseases can sometimes spread rapidly and can be fatal, both for animals and for people who are infected. Because of that zoonotic animal must be watched and anticipated so that it is not transmitted to other animals or exchanged to humans (Moenek D, 2016). The way to prevent and cope with various diseases so that food production from livestock is safe for consumption is to always use seedlings and apply good farming practices, use healthy food, and apply strict biosecurity so that the products are safe for consumption (Winarsih WH, 2018). Livestock diseases that can be transmitted to humans have received special attention in prevention and eradication both carried out by the Ministry of Health and the Department of Agriculture, among these diseases are Anthrax, Rabies, Toxoplasmosis, Scabies, Influenza, Brucellosis and diseases transmitted by insects such as fever bloody .. Increasing the number of breeders who keep livestock in the house and the disease is quite large, it is necessary to conduct research. This study aims to analyze the impact of housing in the house on human health in the village of Jraganan Pemalang Regency.

METHOD

This study is an observational analytic study with a cross-sectional approach (Arikunto, 2013). The purpose of this cross-sectional study is to describe the characteristics of the target population based on observations in the sample. Representative assas (the representative) is very important, so that the description is accurate. come to the location to make observations. This research was conducted in Jraganan Village, Bodeh District, Pemalang Regency. Respondents are breeders who keep buffaloes and cows in the house. This research was conducted in September - November 2017.

The total sample of 51 respondents who raise livestock in the house. The sampling technique was carried out by means of the stratifight sample. The research data obtained from questionnaires, interviews, observations and data documentation were analyzed univariate and bivariate with the chi square test..

RESULTS AND DISCUSSION

Animal diseases experienced by animals in this study are skin diseases and diarrhea. Livestock with itching often rub their bodies on poles or cage walls. Areas of itching appear red blotches, boils appear, eventually the skin thickened, scaly, fur fall out and appear scab-scab (Wardhana et al, 2006). Diarrhea is one of the signs of intestinal worms, namely decreased appetite, distended stomach, weak, pale in the mucous membranes of the eyes and diarrhea (Mathur, 2005). Giardia intestinalis is an infectious disease animals and humans that cause liquid diarrhea, malabsorption, weight loss and decreased milk production, dehydration, and can end in death (Wardhana et al, 2006). Sanitation is an effort to prevent disease by eliminating or regulating environmental factors related to the movement of the disease (Suryana, 2006). This study aims to determine the relationship between risk factors for raising cows and buffaloes in the house (one house) and outside the house (separated) by being exposed to various diseases in the village of Jraganan, Bodeh District, Pemalang Regency.

Skin Disease in Livestock

Characteristics of livestock suffering from skin disease based on observations are presented in Table 1 below.

Table 1. Frequency distribution of skin diseases in livestock

Skin Diseases in Livestock	Frequency	Percentage
Yes	25	49
No	26	51
Total	51	100

Skin Disease in Stock Farmers

Characteristics of respondents suffering from skin disease based on observations are presented in Table 2 below

Table 2. Frequency distribution of skin diseases in stock farmers

Skin Diseases in Stock Farmers	Frequency	Percentage
Yes	22	43,1
No	29	56,9
Total	51	100

Diarrhea in Livestock

Characteristics of livestock suffering from diarrhea based on observations are presented in Table 3 below.

Table 3. Frequency distribution of diarrhea in livestock

Diarrhea in Livestock	Frequency	Percentage
Yes	12	23,5
No	39	76,5
Total	51	100

Skin Disease in Stock Farmers

Characteristics of respondents suffering from diarrhea based on observations are presented in Table 4 below

Table 4. Frequency distribution of diarrhea in stock farmers

Diarrhea in Stock Farmers	Frequency	Percentage
Yes	17	33,3
No	34	66,7
Total	51	100

The relationship between diseases suffered by livestock and farmers in the form of diarrhea

Statistical testing between the risk variables of raising cows and buffaloes in the house (one house) with contracting various diarrheal diseases in Jraganan Village, Bodeh District in 2017 is listed in the following Table 5.

Table 5. Relationship of diarrheal diseases suffered by livestock with diarrheal diseases suffered by farmers

Livestock live inside the house	Risk of Contracting the disease				Total		P
	Contracting		Not contracting				
	F	%	F	%	F	%	
Yes	9	75	3	25	12	100	0,000
No	8	21	31	79	39	100	
Total	17	33,3	34	66,7	51	100	

Based on Table 5, it is known that home in respondents with a risk of contracting diarrhea as many as 12 people or 100%. The results of statistical analysis show that the p-value = 0,000 ≤ 0.05 means that it can be concluded that there is a relationship between diarrheal diseases suffered by livestock and diseases suffered by farmers in the form of liquid defecation in Jraganan Village, Bodeh District in 2017.

The relationship between diseases suffered by livestock in the form of skin diseases

Statistical testing between the risk variables of raising cows and buffaloes in the house (one house) with contracting various skin diseases in Jraganan Village, Bodeh District in 2017 can be seen in table 6 below.

Table 6. Relationship of skin diseases suffered by livestock with skin diseases suffered by farmers

Livestock live inside the house	Risk of Contracting the disease				Total		P
	Contracting		Not contracting				
	F	%	F	%	F	%	
Yes	18	72	7	28	25	100	0,000
No	4	22	22	78	26	100	
Total	22	43,1	29	56,9	51	100	

Based on table 6, it is known that there are 25 people living in the house with the risk of contracting the disease by 25 people or 100%. Statistical analysis shows that the p-value = 0,000 ≤ 0.05 means that it can be concluded that there is a relationship between skin diseases suffered by livestock and diseases suffered by farmers in the form of skin diseases in Jraganan Village, Bodeh District in 2017.

Skin disease shows a p-value = 0,000 ≤ 0.05 which means that it can be concluded that there is a relationship between skin diseases suffered by livestock and diseases suffered by farmers in the form of skin

diseases. Affected farmers often rub their bodies on poles or walls of the cage. Itchy areas appear red blotches, ulcers arise, eventually thickened skin, scaly, hair loss and scabs arise (Wardhanaet all, 2006).

Diarrheal disease shows a p-value = 0,000 ≤ 0.05 which means that it can be concluded that there is a relationship between diarrheal diseases suffered by livestock and diseases suffered by farmers in the form of liquid defecation in Jraganan Village, Bodeh District. As stated, livestock diseases not only attack livestock but can also be transmitted to humans are called "ZOONOSIS" diseases (WHO, 2010).

CONCLUSION AND SUGGESTION

In the house with respondents at risk of contracting the disease as many as 51 people or 53.12%. The results of the study concluded that cage in the house has a higher risk of contracting diseases from livestock to humans, namely skin diseases and diarrhea. Diarrhea and skin diseases in cows, especially cows, are not a disease, but rather are clinical signs or symptoms of a more complex disease that can be caused by various things. This means that keeping livestock in one house or living in a house is at risk of contracting livestock diseases compared to maintaining livestock that live outside the house. The distance between livestock that is so close to even living with one house and its owner gives direct contact both direct air pollution, and from direct food pollution, as written by Bahri & Safriati. Sanitation is an effort to prevent disease by eliminating or regulating environmental factors related to the movement of the disease as written by Suryana.

Suggestion, for health agencies or puskesmas or the Pemalang District Animal Husbandry Office, it is better to provide socialization to Jraganan villagers, related to the impact of visiting the house for the health of family members.

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