

COMMUNITY SERVICE IN IMPROVING ANIMAL HEALTH : DISEASE SOCIALIZATION AND FMD VACCINATION IN CATTLE AND GOATS IN PADUKUHAN JORONG

Siti Zahratul Kamilati ^{1*}, Hajarul Aswad Panggabean ¹, Alfina Viona Isabela
Widiawati¹, Musthofa¹

¹ UIN Sunan Kalijaga, Yogyakarta

*20104040023@student.uin-suka.ac.id

Abstract - *In maintaining the health of cattle, vaccination is regularly carried out. Vaccination is done to build the animal's immune system so that it can fight viruses that enter its body. Most residents of Padukuhan Jorong, Girijati Village, Kapanewon Purwosari, Gunung Kidul Regency are cattle and goat breeders. the spread of disease in cattle is rife. In fact, several cases occurred in Gunungkidul Regency. Diseases that are currently widespread in cattle are anthrax, lato-lato, foot and mouth disease, and so on, so it is very necessary to vaccinate livestock. In implementing this vaccination, we collaborate with the Gunung Kidul Regency Animal Husbandry and Health Service, and the type of vaccine given is FMD (Foot and Mouth Disease). Before vaccinating livestock, socialization is held so that residents gain knowledge regarding the care of livestock, especially cows and goats, as well as providing an understanding regarding vaccines, including the function, purpose and side effects of vaccines. Vaccination will be carried out on August 22, 2023 with a door-to-door system. From the flagship FMD vaccination program for livestock, 33 cows and 23 goats in Padukuhan Jorong have been vaccinated. In addition to giving vaccinations, the vaccination team also provides vitamins to livestock that have been vaccinated.*

Keywords: *Vaccination, FMD, Livestock*

1. INTRODUCTION

Livestock such as cows, goats, sheep and chickens are susceptible to disease. Diseases that attack livestock at any time can have a negative impact on livestock productivity and cause losses for farmers (Alam & Sugiarto, 2022). This attacking disease can have a negative impact on animal welfare and livestock productivity. Possible losses include expensive medical expenses, dead livestock, decreased use production (Nuraini et al., 2020; Sukoco et al., 2022) . Many diseases can attack livestock. This disease can arise due to the lack of alertness of breeders to their livestock. However, this problem can be prevented by injecting vaccines into livestock.

Cattle is not the main livelihood in Padukuhan Jorong. Mainly, residents work as farmers. The knowledge of caring for cattle is passed down from generation to generation. About the food taboos for cows, what plants are suitable for cows and how to care for sick cows, the residents already know. However, the knowledge possessed by residents is not yet completely correct. Because, knowledge possessed only based on "he said". Breeders need to strive for knowledge of this care as much as possible. Therefore, the community, especially cattle breeders in Padukuhan Jorong, need to have exact knowledge about how to prevent disease and treat cattle properly and correctly. They can get this knowledge by participating in the socialization of disease prevention and cattle care. Socialization of health and disease in livestock is important to increase public knowledge about livestock health and provide a deeper understanding of livestock (Andriani et al., 2023). In this socialization, farmers are taught how to manage the maintenance of livestock so that they do not contract the disease and do not transmit the disease to other livestock (Fadli et al., 2023) .

In addition to the participation of breeders in socializing disease prevention, it is also necessary to pay attention to the livestock themselves. To maintain the health of cattle, vaccinations are regularly carried out (Djarajah, 1996 ; Suyasa et al., 2016) . Vaccination is done to build the animal's immune system so that it can fight viruses that enter its body. Apart from that, vaccination is also carried out to increase livestock productivity. There are many types of vaccinations for livestock, so vaccinations are adjusted to the condition of the livestock. This is because vaccination can have side effects for livestock. Like humans, the bacteria in vaccines injected into livestock need to adapt to their host's body. However, that doesn't last long, because after that, the livestock will become stronger and more immune to disease.

How breeders treat and how breeders supervise their livestock is one of the factors causing livestock health problems (Suyasa et al., 2016) . Lack of care and supervision can cause livestock to contract a disease. Diseases that may affect cattle and goats, for example, mastitis, anthrax, intestinal worms, scabies, foot and mouth disease (FMD) and so on (Sukoco et al., 2022) .

Nowadays, the spread of disease in livestock is widespread. In fact, several cases occurred in Gunungkidul Regency. One of the diseases that is currently

widespread is Foot and Mouth Disease (FMD). This disease arises due to type A virus from the Picornaviridae family, Aphthovirus genus, namely Aphtae epizooticae (Dwi Subekti, 2023). FMD-infected cattle usually show symptoms such as fever, ulcers, sores on the sense organs (mouth, nose, etc.), blisters on the toes, laziness to move, excessive saliva production and decreased or even loss of livestock's appetite (Kusuma et al., 2022). This virus continues to live as long as the virus seeds are still in the air for 14 days (Syamsyudin, 2001 ; Firman et al., 2022). The FMD virus can spread in several ways, for example direct contact with infected livestock, nasal snot in livestock, skin flakes, food waste contaminated with the virus, air and/or through equipment used by farmers (shoes, hands, clothes, etc.) (Rizky, 2022 ; Martin, 2023). The consequences of FMD include decreased livestock production and reproduction, economic losses for breeders, and so on (Sarsana I Nyoman & Merdana I Made, 2022).

The target location for our project is the Jorong Padukuhan, Girijati Village, Kapanewon Purwosari, Gunungkidul Regency. Most Jorong residents are cattle and goat breeders. Residents make cows and goats as an investment to support their economy in the future. At the padukuhan level, no one has pioneered the cattle group. The number of cows in this village is around 80 cows. From the data we got, 80% of the population of Padukuhan Jorong keep cows and goats. This is the basis for the thinking of this project. It is fitting for residents, especially cattle breeders, to be aware of the spread of this disease. Case studies and experiences from affected residents provide new insights for cattle breeders in Padukuhan Jorong.

Diseases that attack livestock can be prevented and also treated. So that healthy livestock do not contract the disease, prevention can be done by administering vaccines. In livestock that have contracted the disease, it can be overcome by giving the right treatment so that the livestock recovers quickly. So that the disease does not spread to other livestock, treatment is also given to healthy livestock. Treatment that can be done, for example, sterilizing the cage from flies.

The health of livestock is very important for farmers because healthy cows and goats definitely have a high selling value. One of the objectives of the livestock business is as a source of producing high protein food, namely meat, milk, and others (Winarsih, 2018; Sukoco et al., 2022). It was explained at the beginning that cattle farming is an investment for residents. In other words, cows are assets that can be cashed in at any time. The hope is that these cows will be able to help the local economy when it is really needed. With this cow health outreach project and FMD vaccination, we hope to help residents realize what they want.

2. METHOD

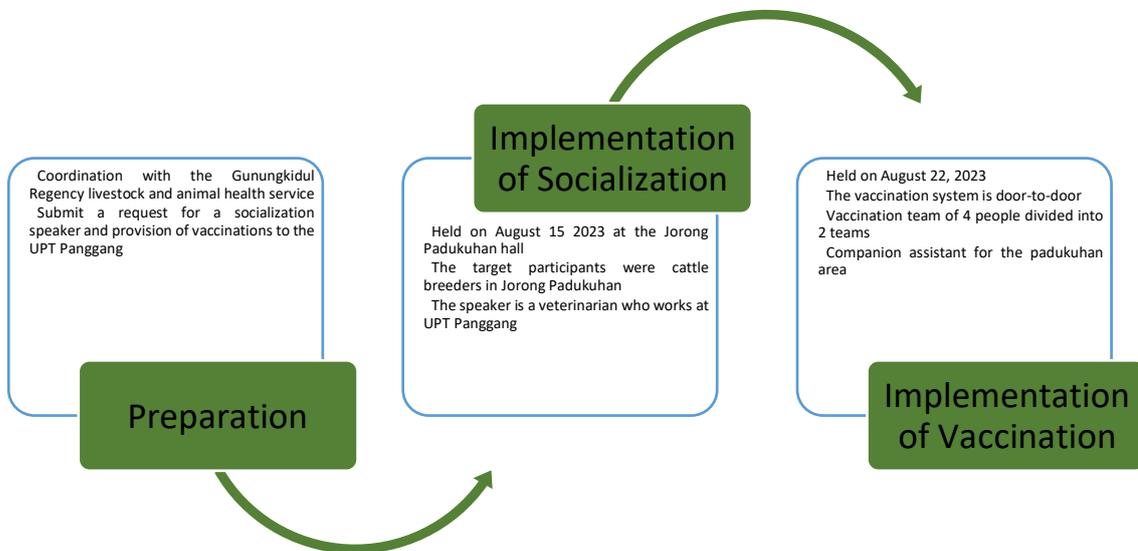
We carry out this community service in Padukuhan Jorong, Kalurahan Girijati, Kapanewon Purwosari, Gunungkidul Regency. In implementing this vaccination, we are collaborating with the Gunung Kidul Regency Animal Husbandry and Animal Health Service, and it will be carried out by Dr. Rumiati and three companions. The

type of vaccine that will be given is FMD (Foot and Mouth Disease). Vaccination will be carried out on August 22 2023.

Before vaccination is carried out on livestock, socialization is held so that residents gain knowledge regarding the care of livestock, especially cows and goats, as well as providing an understanding regarding vaccines, including the function, purpose and side effects of vaccines. The resource person in this socialization was Dr. Rumiati, she is a veterinarian who was brought in from the Kapanewon Animal Health Center in Purwosari.

We also collected data on the number of cows and goats to be vaccinated and asked residents for approval for the vaccination by visiting residents' homes one by one. To make it more effective, we collect data during community gatherings such as recitations or routine RT social gatherings.

Vaccination is carried out using a door to door system, in which officers visit the cages one by one. Vaccination officers were divided into two teams, the first team was in charge of carrying out vaccinations in RT 1 and RT 2, while the second team was in charge of carrying out vaccinations in RT 3 and RT 4.



Most breeders are willing to have their livestock vaccinated, and breeders are very happy that this vaccination has been carried out. This is because previously it had never been held at Padukuhan Jorong. From the statements of several residents, they said that the residents were greatly helped by this livestock vaccination, because this project bridged the distribution of vaccine stock assistance at the Kapanewon Animal Health Center, Purwosari.

There are obstacles in the implementation of this socialization and vaccination. The busyness of the various residents resulted in the difficulty of adjusting the implementation time. Due to the sudden information from informants, the socialization resulted in our lack of preparation in carrying out the socialization,

such as the sudden invitation to each RT so that the invitation to the residents as a whole did not reach which resulted in only a small number of breeders attending the socialization. So that the knowledge in the socialization is conveyed to breeders, we convey it directly when we collect data.

When implementing vaccination, there are also obstacles, namely some farmers cannot accompany their livestock. Therefore, we are working with each RT head to represent farmers who are unable to accompany their livestock.

3. RESULTS AND DISCUSSION

Disease socialization activities in livestock were carried out on August 15, 2023 with resource persons drh. Rumiwati, one of the Veterinary Medicine at UPT Puskesmas Panggang. This socialization activity was attended by several representatives from each RT in Padukuhan Jorong. During the socialization activities, the residents were quite enthusiastic about the material presented by the speakers. It was seen that one by one the residents gave several questions to the resource persons, so that the socialization activities felt more lively because of the discussions that developed.

The material presented in the socialization was none other than diseases in livestock; cows and goats. The presenter recounted his experience while handling livestock that contracted the disease. Besides that, the speaker also warned breeders to take good care of their livestock by keeping the cows and goats clean and healthy.



Figure 2. Socialization of Diseases in Livestock

On August 22 2023, FMD vaccination activities for livestock, especially cows and goats, were carried out. This vaccination activity was carried out using a door-to-door system, in which the vaccination team visited the livestock pens belonging

to residents who had previously agreed and agreed to have their livestock vaccinated against FMD. The vaccination was carried out by drh. Rumiya and three companions were divided into 2 teams. Because Padukuhan Jorong consists of 4 RTs, one vaccination team carries out vaccinations in 2 RTs, namely the first team is in charge of carrying out vaccinations in RT 01 and RT 02, while the second team is in charge of carrying out vaccinations in RT 03 and RT 04.

From the flagship FMD vaccination program for livestock, 33 cows and 23 goats in Padukuhan Jorong have been vaccinated. In addition to giving vaccinations, the vaccination team also provides vitamins to livestock that have been vaccinated. In administering the vaccine, the team also considered the condition of the livestock. Because vaccines have side effects for livestock. Cattle that are underweight, are young pregnant, are breastfeeding or have been previously vaccinated, are not vaccinated anymore.



Figure 3. FMD Vaccination in Livestock

With the implementation of disease socialization in livestock in Padukuhan Jorong, residents got exact knowledge about how to prevent disease and properly and properly care for livestock, especially cows and goats. The implementation of FMD vaccination activities in cows and goats makes the immune system of livestock animals increase and can fight viruses that enter their bodies.

4. CONCLUSION

From the presentation of the results and discussion it can be concluded:

1. The socialization of diseases in livestock was carried out on August 15 2023 at Padukuhan Jorong which aims to provide farmers with an understanding of diseases in livestock and provide an understanding of the benefits and impacts of vaccination on livestock.

2. The FMD vaccination was carried out on August 22 2023 at Padukuhan Jorong with 33 cows and 23 goats vaccinated livestock. The FMD vaccination aims to improve the immune system of cattle and goats.
3. With the socialization of diseases in livestock at Padukuhan Jorong, residents get exact knowledge about how to prevent disease and take care of livestock, especially cows and goats properly and correctly. The implementation of FMD vaccination in cows and goats makes the immune system of livestock increase and can fight viruses that enter their bodies. Apart from that, the residents of Padukuhan Jorong feel helped by the FMD vaccination work program.

REFERENCE

- Alam, A., & Sugiarto, S. (2022). Analisis Sensitivitas Model Matematika Penyebaran Penyakit Antraks pada Ternak dengan Vaksinasi, Karantina dan Pengobatan. *Jurnal Ilmiah Matematika Dan Terapan*, 19(2), 180–191. <https://doi.org/10.22487/2540766x.2022.v19.i2.16017>
- Andriani, A. P., Hadid, T., & Rezky, S. (2023). Sosialisasi Pencegahan dan Penanganan Wabah PMK pada Masyarakat Desa Tanjung Rejo, Kecamatan Wuluhan Kabupaten Jember. *JURNAL KREATIVITAS PENGABDIAN KEPADA MASYARAKAT (PKM)*, 6(5), 2016–2023. <https://doi.org/https://doi.org/10.33024/jkpm.v6i5.8508>
- Dwi Subekti, H. (2023). *Pelaksanaan Program Vaksinasi PMK di Dinas Peternakan dan Perikanan dalam Upaya Pencegahan Penyakit PMK* [Universitas Muhammadiyah Ponorogo]. <http://eprints.umpo.ac.id/id/eprint/12856>
- Fadli, C., Risna, Y. K., Al adam, K., Zubaidah, S., & Fitrah, H. (2023). Sosialisasi Penyakit Mulut dan Kuku pada Peternak di Desa Blang Pala Kecamatan Peusangan Selatan. *Rambideun : Jurnal Pengabdian Kepada Masyarakat*, 6(2), 112–117.
- Firman, A., Trisman, I., & Puradireja, R. H. (2022). Dampak Ekonomi Akibat Outbreak Penyakit Mulut Dan Kuku Pada Ternak Sapi Dan Kerbau Di Indonesia. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, 8(2), 1123–1129. <https://doi.org/10.25157/ma.v8i2.7749>
- Kusuma, R. A. A. A., Hawari, M. S., Hawalai, M., Viloute, M., Moestoko, P., & Dameanti, F. N. A. E. P. (2022). Sosialisasi Wabah Penyakit Mulut dan Kuku pada Kelompok Ternak Sapi Perah Sukses Bersama di Desa Deyeng , Kabupaten Kediri, Jawa Timur. *Prosiding Seminar Nasional UNIMUS*, 5, 2138–2142. <https://prosiding.unimus.ac.id/index.php/semnas/article/view/1193>
- Martin, D. (2023). *Penanganan Penyakit Mulut dan Kuku (PMK) pada Sapi Bali di Pusat Kesehatan Hewan Bangka Selatan* [Universitas Jambi]. <https://repository.unja.ac.id/id/eprint/53587>
- Sarsana I Nyoman, & Merdana I Made. (2022). Vaksinasi Penyakit Mulut dan Kuku Pada Sapi Bali di Desa Sanggalangit Kecamatan Gerokgak Kabupaten Buleleng -Bali. *Jurnal Altifani Penelitian Dan Pengabdian Kepada Masyarakat*, 2(5), 447–

452. <https://doi.org/10.25008/altifani.v2i5.277>
- Sukoco, H., Ali, N., Susanti, I., Irfan, M., Agustina, A., Suhartina, S., Marsudi, M., & Susanti, E. (2022). Sosialisasi Penyakit pada Sapi dan Kambing Serta Pencegahannya di Desa Salarri Kecamatan Limboro, Polewali Mandar. *Bubungan Tinggi: Jurnal Pengabdian Masyarakat*, 4(2), 581. <https://doi.org/10.20527/btjpm.v4i2.5238>
- Suyasa, Sarini, & Lindawati. (2016). Penerapan Manajemen Pencegahan Penyakit Di Peternakan P4S Mupu Amerta, Banjar Sale, Desa Abuan, Bangli. *Journal of Tropical Animal Science*, 4(1), 181–188.