

Study of Inappropriate Antibiotic Usage in Cattle Farm in East Nusa Tenggara

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Keywords: antibiotic, cattle farm, inappropriate usage.

INTRODUCTION

Antibiotics have an inhibitory effect on the growth of microorganisms [1]. The inappropriate use of antibiotics has an impact on human health, animals and the environment [2,3]. Therefore prescription Antibiotic use should be given by veterinarian. In fact, a number of breeders are practicing antibiotic beef cattle without a veterinary prescription. The purpose of this study was to determine the percentage of antibiotics used without prescription from veterinarians by farmers in Kupang City, East Nusa Tenggara.

MATERIALS AND METHODS

The study was conducted from February to June 2018. A total of 100 questionnaires were distributed to 100 farmers in 6 sub-districts in Kota Kupang, East Nusa Tenggara. This research uses descriptive analysis method through data processing from questionnaire.

RESULT AND DISCUSSION

Based on the results of the study, 4% of respondents have known antibiotic function and 90% others do not know the benefits of antibiotics. This is in accordance with the experience of farmers who are about 93% have never received counseling about what the function of antibiotics for the human body and animals. Research [4] demonstrated that knowledge and attitudes towards the use of antibiotics in the community play an important role in the success of the treatment process. One solution that can be given is increased knowledge through counseling about antibiotics that may affect the level of community knowledge [5].

The reason farmers provide antibiotics or treatment without a vet prescription because generally have known how to administer antibiotics. Based on the results of the study, as many as 50% of farmers choose to conduct their own treatment in accordance with their experience and based on information from other communities about the treatment of diseased cattle as much. Another reason is that there is no nearest Animal Health Center (Puskesmas) as much as 46%. There are also respondents who say that there are no

animal health officers in the Puskesmas (3%) and the cost of sick livestock examination and treatment is too expensive (1%) (Table 1).

Table 1. The reason farmers provide antibiotics or treatment without a vet prescription

The reason farmers	Percentage of respondents
Able to self-medication	50%
No nearby Puskesmas	46%
There was no officer at Puskesmas	3%
High medical costs	1%

Farmers in Kupang City 94% used antibiotics in treating sick livestock while the other 6% used traditional medicine. Based on the data obtained that there are 94% of cattle farmers can freely buy antibiotics at various veterinary shops in Kupang City without including a vet recipe.

Based on the results of research the most commonly used type of antibiotics is from the Tetracycline class of 79% with each trade name Vet Oxy® 41%, Terramycin® 27%, Piroxy® 9% (with active Oxytetracycline ingredients) and Doxi Vet® 1% (Figure 1).

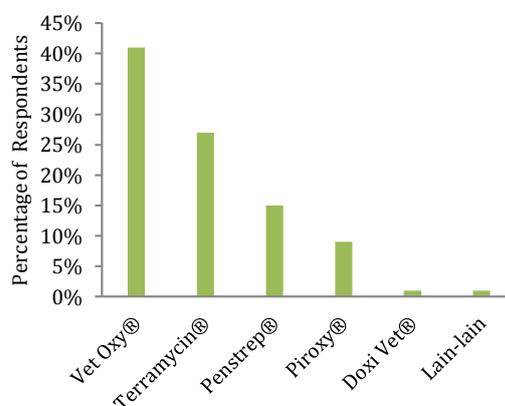


Figure 1. Types of trade names of antibiotics used by farmers

CONCLUSION

Provision of antibiotics in cattle without veterinary prescriptions as much as 94% on the grounds can do their own treatment without a veterinarian. Low community knowledge can lead to inappropriate applications by farmers.

REFERENCES

- [1] Katzung BG. 2008. *Farmakologi dasar dan Klinik*. Alih bahasa, Staf Dosen Farmakologi Fakultas Kedokteran UNSRI. Ed. 6, editor, H. Azwar Agoes. Jakarta (ID): EGC.
- [2] Etikaningrum, Iswanto S. 2017. Kajian Resistensi Antibiotika pada Unggas di Indonesia. *Jurnal Ilmu Produksi dan Teknologi Hasil Peternakan* 5(1):29-33.
- [3] Phillips I, Casewell M, Cox T, Groot B, Friis C, Jones R, *et al.* 2004. Does The Use of Antibiotiks In Food Animal Pose A Risk To Human Health. *Journal Of Antimicrobial Chemotherapy* 53:28-52.
- [4] Oh AL, Hassali MA, Al-Haddad MS, Sulaiman SAS, Shafie AA, Awaisu A. 2011. Public knowledge and attitudes towards antibiotik usage: a crosssectional study among the general public in the state of Penang, Malaysia. *J Infect Dev Ctries* 5(5):338-347.
- [5] Wowiling, Chalvy LR, Goenawi G, Citraningtyas. 2013. Pengaruh Penyuluhan Penggunaan Antibiotik terhadap Tingkat Pengetahuan Masyarakat di Kota Manado. *Pharmacon Jurnal Ilmiah Farmasi UNSRAT* 2(3):24-28.