



Tropentag, September 16-18, 2026, hybrid conference

“Towards multi-functional agro-ecosystems
promoting climate resilient futures”

Antimicrobial use and knowledge among camel pastoralists in Ethiopia

BERHANU WAKJIRA¹, HASSANUR HASSAN KALLA², REGINA ROESSLER², BEKELE MEGERSA¹

¹*Addis Ababa University, College of Veterinary Medicine and Agriculture, Ethiopia*

²*University of Kassel, Animal Husbandry in the Tropics and Subtropics, Germany*

Abstract

Use of antimicrobials among pastoralists is essential for maintaining livestock health and livelihoods in the arid and semi-arid regions of East Shewa and Borana zones in Ethiopia. However, limited access to veterinary services and lack of formal training strongly influence how these drugs are used. This study examines the knowledge and practices related to antimicrobial use among Ethiopian camel herder pastoralists.

A baseline survey was conducted among 386 camel pastoralists to assess camel health management practices. This was followed by a larger antimicrobial use survey combining structured interviews with herders in Borana (1,829 herd of camels) and East Shewa (5,185 herd of camels). The aim was to evaluate pastoralists' knowledge, practices, and sources of information regarding antimicrobial drug use.

The results revealed a higher camel population in East Shewa (73.92 %) compared to Borana (26.1 %). Antimicrobial use was widespread, with nearly all herders (98.71 %) using these drugs to manage camel diseases, often without professional prescription. Only 10.4 % of respondents in Borana and 2.1 % in East Shewa reported seeking advice from veterinary professionals.

Pastoralists demonstrated strong practical experience in identifying common camel diseases. However, there were significant gaps in knowledge related to appropriate drug selection and dosage. Only 2.6 % of herders reported receiving dosage information from veterinarians, while 12.76 % relied on other herders. In contrast, 52.34 % and 30.99 % obtained information from private drug vendors and veterinary pharmacists, respectively.

Awareness of drug withdrawal periods was very low. About 84.50 % of herders were unaware of withdrawal times and reported consuming camel milk immediately after antibiotic treatment. Additionally, 91.99 % lacked awareness of drug residues and their role in antimicrobial resistance. Informal drug sourcing and self-administration practices were highly prevalent, reported by 97.67 % of respondents.

These findings highlight critical gaps in knowledge and practice regarding antimicrobial use among pastoralists. There is a clear need for targeted awareness creation, improved access to veterinary services, and community-based education programs. Promoting responsible antimicrobial use is essential to reduce the risk of antimicrobial resistance and to improve both animal and public health outcomes.

Keywords: Antimicrobial drug use, Camel herders, Ethiopia, Pastoralist community

Contact Address: Berhanu Wakjira, Addis Ababa University, College of Veterinary Medicine and Agriculture, Addis Ababa, Ethiopia, e-mail: berhanu.wakjira25@gmail.com