

# Antibiotic use on Kenya's dairy farms is putting consumers and animals at risk

February 21 2024, by Dishon Muloi and Arshnee Moodley

---



Credit: CC0 Public Domain

Farmers often use antibiotics to keep their livestock healthy. They're sometimes used as "quick fixes", to avoid more costly management measures like regular disinfection, waste management, routine

vaccination or provision of clean drinking water.

Animal husbandry now accounts for about [two thirds](#) of the global consumption of antibiotics. As livestock and fish production grows, by 2030 the consumption of antibiotics is [projected to increase](#) by 67%.

Worryingly, this overuse in food animal production can create problems for both animals and people.

It can contribute to the development of antibiotic-resistant bacteria which, through food or environmental exposure such as drinking contaminated water, can be transmitted to people.

This means that some antibiotics may become ineffective in treating human infections. Antibiotic resistant infections are associated with [4.95 million deaths](#) globally every year. Sub-Saharan Africa [accounts for](#) 22% of these.

Similarly, animals can also become infected with antibiotic-resistant bacteria. This leads to infections that are difficult or impossible to treat.

Our latest [study](#), which focused on the central Kenyan highlands, looked at antibiotic use on smallholder [dairy farms](#) as well as antibiotic quality (substandard or counterfeit antibiotics).

Kenya is one of the largest milk producers in Africa and one of the countries with the largest per capita consumption of milk. About [80%](#) of the milk produced in Kenya comes from smallholder farmers.

We found that [smallholder farmers](#) weren't using antibiotics properly and were buying poor quality products. Also, traces of some antibiotics were found in milk.

This puts the health of both people and animals at risk.

## Antibiotic access and use

For our study, we collected data from 248 dairy farms and 72 veterinary drug stores between February 2020 and October 2021. This included milk samples and the antibiotics themselves.

Most dairy farms surveyed reported using antibiotics at least once in the past year. This is not unusual—cows get sick. Dairy cows are especially prone to getting udder infections.

Antibiotics were used to treat and to prevent infections. Most were obtained through animal health service providers. A small number (6%) were bought directly from veterinary drug stores or other farmers.

Antibiotics were often sold without a prescription, and based on farmers' own diagnosis. These are imprudent practices—the wrong antibiotic could be used to treat an infection or antibiotics could be overused.

The improper or excessive use of antibiotics in dairy farming can lead to the development of antibiotic-resistant bacteria. This then leads to [economic losses](#) for farmers, because animals will be less productive and the cost of treatment will grow.

It's estimated that, as a result of antimicrobial resistance, livestock output could [fall by 11% by 2050](#), with the highest decline in low income countries.

There's also [the risk](#) of these antibiotic-resistant bacteria being transmitted to humans, either directly through contact with animals or indirectly through the consumption of milk and dairy products. This can lead to infections that are difficult to treat, posing a public health risk.

## Antibiotics found in milk

Also worrying, in this study we detected nine antibiotics in milk. Three samples exceeded [global standards](#). Antibiotics can get into milk supplies when withdrawal times are not strictly followed.

The presence of antibiotic residues in milk—even at low levels— can pose health risks to consumers, particularly those who are allergic to specific antibiotics.

Even for those who aren't allergic, prolonged exposure to low levels of antibiotics [may contribute](#) to the development of antibiotic-resistant bacteria.

## Quality of antibiotics

The study also examined the quality of antibiotics available in veterinary drug stores in central Kenya.

Poor quality, substandard, or counterfeit antibiotics can lead to ineffective treatment and prolonged illness. Low-quality antibiotics are even more likely to contribute to the development of [antibiotic-resistant bacteria](#). This is because they won't fully eradicate the pathogen (disease-causing bacteria), allowing them to adapt and become resistant.

Almost 44% of the antibiotics we tested were of poor quality. This has considerable implications for the efficacy and safety of these drugs. It can also contribute to antibiotic resistance.

## Implications

The findings of the study underscore the need for better management

practices on Kenya's dairy farms. This includes:

- stricter regulation of antibiotic sales
- improved veterinary oversight
- education of farmers about the risks of antibiotic misuse.

For a country like Kenya, where agriculture plays a significant role in the economy, ensuring livestock is healthy and productive is crucial for both farmers and the country.

We recommend a few steps for policymakers to take:

- strengthen regulations around [antibiotic use](#) in livestock
- enhance surveillance and monitoring systems for antibiotic residues in milk
- improve the quality control of antibiotics sold in veterinary drug stores
- educate farmers about the responsible use of antibiotics
- promote better [animal husbandry](#) practices that reduce the reliance on antibiotics.

This article is republished from [The Conversation](#) under a Creative Commons license. Read the [original article](#).

Provided by The Conversation

Citation: Antibiotic use on Kenya's dairy farms is putting consumers and animals at risk (2024, February 21) retrieved 29 April 2024 from <https://phys.org/news/2024-02-antibiotic-kenya-dairy-farms-consumers.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.