

## ABSTRACT

Endometritis being a post-partum uterine infection in dairy cows is likely with substantial production loss through reduction in milk yield (MY), discarded milk during treatment and withdrawal period, and increased cost of veterinary treatment. This study quantified the influence of endometritis on MY of zero-grazed dairy cows managed on smallholder farms in Rwanda. The study enrolled a total of 461 cows within their 21 to 60 days in milk to examine for clinical endometritis (CLE) and subclinical endometritis (SCLE). A cow was considered having endometritis if it was positive for at least one test (CLE or SCLE), otherwise was negative. The MY data were collected prospectively from endometritis positive and negative cows for 30-day post-endometritis diagnosis. Compared to cows negative for endometritis, the positive endometritis cows were 2.4 times more (29.7 vs. 70.3%) with daily MY 15.3% lower ( $7.5 \pm 0.2$  vs.  $8.9 \pm 0.3$  litres;  $p < 0.05$ ), representing a reduction of  $1.4 \pm 0.2$  litres of milk/cow/day. Of the CLE positive cows, 33.4% (104/311) were treated using different veterinary drugs, which resulted in 23.5% more discarded milk compared ( $p < 0.05$ ) to untreated positive cows. Discarded milk was higher ( $p < 0.05$ ) among cows treated with oxytetracycline ( $65.9 \pm 4.4$  litres) compared to cows treated with procaine penicillin G and dihydrostreptomycin ( $35.5 \pm 2.7$  litres). The percentage of total milk loss was much higher (45.6%) among CLE positive cows that received treatment compared to the untreated cows (16.3%). These results demonstrate a strong association between MY loss and endometritis. A timely diagnosis and treatment of the disease is recommended using conventional veterinary drugs that have zero withholding time for milk to reduce the MY loss and associated economic loss, estimated at 154 US\$ in a lactation.

### Keywords

Days postpartum  
Discarded milk  
Production loss  
Treatment  
Veterinary drugs