

Experts advise using benchmarking to identify farms with high antibiotic use

December 20 2017



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A number of British dairy farms are using extremely high levels of

antibiotics in their cattle, finds a study published by *Vet Record* today.

The findings from a large sample of farms across the UK, indicate that while most [dairy farms](#) exhibit lower antibiotic use than the UK livestock average, there are several outlying farms with high levels of use.

The researchers say that identifying these high use farms will enable targeted strategies for disease prevention, to help reduce antibiotic use in [dairy herds](#) and combat antibiotic resistance in the farming industry.

Antimicrobial resistance (AMR) represents a growing threat to both human and animal health and there has been mounting pressure on the livestock industry to reduce antibiotic use to tackle resistance.

But in order to identify areas where antibiotic use could be reduced, refined or replaced, there is a need to measure antimicrobial use (AMU) on UK [dairy](#) farms. So the Dairy Herd Health Group at the University of Nottingham's School of Veterinary Medicine and Science, set out to measure antimicrobial use in a sample of British dairy farms.

Using [farm](#) medical records and antibiotic sales data, they analysed antibiotic use on 358 dairy farms over a 12-month period. The sample included over 81,500 [dairy cows](#) (7% of dairy cows in England).

The results show a wide spectrum of antibiotic use across dairy farms. Most [antibiotics](#) (78% of the total used by or sold to the farms) were given via injections.

When farms were ranked by usage, the top 25% used just over half (52%) of the total antibiotics across all farms in the sample. Use of oral antibiotics and antibiotic footbaths (for digital dermatitis - a condition that causes lameness in cattle) were also more prevalent on farms with

high overall use.

The researchers cannot rule out the possibility that other unmeasured factors may have influenced their results, but say this study "provides a benchmark for dairy cattle AMU in Britain and identifies several factors associated with high AMU."

The team have also created a freely available antibiotic usage calculator tool, which enables veterinarians to benchmark antibiotic usage on dairy farms.

They suggest that "targeting the reduction of AMU among the minority of high antimicrobial users while maintaining high standards of health, welfare and production may be a fast and effective first step to reduce AMU at farm, practice and national levels. Veterinary input to improve health and welfare of the herd will reduce the need to use antibiotics for treatments."

In a linked commentary, veterinarian Lucy Coyne agrees that benchmarking antimicrobial use "may be a useful tool in improving farmer awareness of their current level of antimicrobial use and in identifying methods to reducing use."

She says the work by Hyde and colleagues is "timely and welcome as it provides both additional insight into high antimicrobial use practices and potential routes through which use can be reduced."

And she concludes that "through improved antimicrobial use data and a continuation of a united and proactive approach, there should be confidence in the UK dairy sector achieving the reduction target by 2020."

More information: Quantative analysis of antimicrobial use on British

dairy farms, [DOI: 10.1136/vr.104614](https://doi.org/10.1136/vr.104614)

Comment: Antimicrobial use in dairy cattle: 'What gets measured gets improved' [DOI: 10.1136/vr.j5788](https://doi.org/10.1136/vr.j5788)

Provided by British Medical Journal

Citation: Experts advise using benchmarking to identify farms with high antibiotic use (2017, December 20) retrieved 20 April 2024 from <https://phys.org/news/2017-12-experts-benchmarking-farms-high-antibiotic.html>

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