REDUCTION IN ANTIBIOTIC USE IN 800+ GB HERDS SUPPLYING 11 PROCESSORS, FROM VETERINARY PRACTICE SALES DATA AND CHANGES IN FARMER BEHAVIOUR



INTRODUCTION AND OBJECTIVES

Antimicrobial resistance is recognised as a global threat to modern medicine and human health. There is now a continued focus on antibiotic use in agriculture and food producing animals (FPA). Public perception of antibiotic use in FPAs means supply chains need to be able to demonstrate a responsible attitude. Antibiotics are key medicines to help protect animal health and welfare. Zero use in not advocated. In order to identify areas where improvements could be made the first step is to monitor antibiotic usage over time and to engage farmers to stimulate behavioural change at the farm level. The objectives of this work were:

- 1. Describe antibiotic use in a subset of the GB dairy population
- 2. Compare results with industry level RUMA targets
- 3. Explore trends in antibiotic use
- 4. Demonstrate how change management programmes engage farmers in important issues and promote change at the farm level



METHODOLOGY

With consent from the producer, antibiotic sales data (both dispensed and prescribed) were collected from the producer's vet practice. Data are collected and managed through FarmAssist (National Milk Records). The FarmAssist service calculates

antibiotic use using standard European Medicine Agency methodology for mg/PCU, defined daily and course dose (DDD and DCD) measures. The data from FarmAssist can be reviewed

of farms (as here) or as a 'national' dataset.

We acknowledge the support of milk processors and vets to provide these data and for their use in this work.

KEY FINDINGS

- 1. Robust farm level data is available from the dairy industry.
- 2. A reduction in antibiotic use has been seen over the recording period.
- 3. Herd size is not related to antibiotic use.
- 4. HP-CIA use has been reduced substantially.

Year	Farm (n)	Mean Herd Size	Mean mg/PCU	HP-CIA Injectable (mg/PCU)	HP-CIA Intramammary (DCDvet)	Intra mammary tube – dry cow (DCDvet)	Intra mammary tube – lactating co (DCDvet)
RUMA TARGET	n/a	n/a	21.00	0.461	0.166	0.43	0.62
2018	884	227	22.64	0.93	0.18	0.46	0.63
2019	656	233	22.17	0.23	0.05	0.45	0.53
2020	869	229	20.08	0.05	0.01	0.43	0.54
2021	878	233	20.28	0.03	0.00	0.41	0.45
2022	638	229	20.13	0.02	0.00	0.41	0.46
Total	1484	230	21.06	0.27	0.65	0.43	0.53











Analysing antibiotic use on farm is one piece of the jigsaw to striving for efficient food production from healthy animals.

Robust data on antibiotic use is routinely collected from vet practices on behalf of participating milk processors through FarmAssist in conjunction with Kite Consulting. The programme has now seen data collected for five years and during this time a programme of targeted change management has seen significant results.

These results have been achieved by a combination of factors:

a sustained change management programme, aimed at farmers and their vets, run by Kite Consulting in conjunction with milk processors, as well as changes in Red Tractor Standards on the usage of antibiotics on farm and veterinary surgeons support.

The change management programme drew on Kite Consulting's experience in the area to combine technical information, seminars, on-farm events, peer to peer learning and the sharing of best practise. Through discussion and knowledge transfer dairy farmers have fully understood the need for antibiotic reduction on farm as a wider issue for society and acknowledge it is 'the right thing to do' and agree with the Red Tractor Standards.

Dairy farmers now see the collection and review of antibiotic usage data as a normal part of their farm data capture. This programme demonstrates the value of benchmarking the technical data against RUMA targets, as an aid to behaviour change. Benchmarking financial data has long been used to generate change in the farming sector but the sharing of technical information in this way in conjunction with industry support, has helped to create demonstrable behavioural change.

References:

FarmAssist National Summary 2017-2021 – FarmAssist NMR, in press
AHDB. GB producer numbers. https://ahdb.org.uk/dairy/GB-producer-numbers. Published 2022

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Glossary:

HP-CIA: Highest Priority Critically Important AntibioticCIA: Critically Important AntibioticRUMA: Responsible Use of Medicines in Agriculture Alliance