FarmAssist Summary Report

Report 3 // 2017 to 2022

Gaining an insight on Antibiotic Use in GB Dairy Herds

Summary from FarmAssist //
GB Dairy Herds 2017-2022

This is a summary from the FarmAssist dataset on antibiotic use in dairy herds in GB. The FarmAssist service is supported by milk processors and collects medicine records from vet practices for producers that have given consent for these records to be shared. Over 200 vet practices have helped in providing data for their clients, which means the number of herds we can report on has increased from 205 in 2017 to 1,045 in 2022, covering approximately 239,768 cows.

The FarmAssist service provides assurance for the milk supply chain through (1) quantified reports on antibiotic use for processor groups, and (2) farm reports to support vet-producer discussion on herd health and antibiotic use. The data in FarmAssist provide a benchmark to enable processors to assess antibiotic use across their milk pool, and to support vets with practical antibiotic reduction programs for their clients. Vets can access both practice level and individual farm reports through the FarmAssist web portal.

FarmAssist data are analysed and reported using standard RUMA metrics (table 1) and with standard VARSS classification (table 3) to allow direct comparison with previous industry estimates. FarmAssist data are collected quarterly and provide users with the most recent data on antibiotic use for dairy herds in GB. This summary to 2022, plus the first quarter of 2023, will be followed in 2024 with an update to include data from 2023.

The values used in this summary are the mean values from all recorded herds with a complete record for each 12-month recording period.

We are grateful to all the participating vets, their producer clients, and the supporting milk processors for their engagement with FarmAssist and their contribution to this summary report.

The FarmAssist service is provided by National Milk Records. For further information please contact: **farmassist@nmrp.com**.

Key Messages

- The total use, in mg/PCU, has reduced from 22.4 mg/PCU in 2017 to **18.2** mg/PCU in 2022. There was an **8.5% decrease** in total use mg/PCU between 2021 and 2022, at 19.9 to 18.2 respectively (table 1).

- There is a notable reduction in HPCIA use since 2017. There has been a **98%** reduction in use of injectable HPCIA from 0.586 mg/PCU in 2017 to **0.014** mg/PCU in 2022, and a **98%** reduction in use of intramammary HPCIA from 0.132 DCD in 2017 to **0.001** DCD in 2022. In 2022, **94%** of herds had no recorded HPCIA use (table 1).

- In 2022, the mean number of milking cow and dry cow treatments was **0.402** DCD and **0.396** DCD respectively (table 1) which if put onto a herd of 100 cows, this means that on average, **40** cows had a course of treatment for mastitis and **60** were dried off *without* antibiotic treatment.

- The proportion of herds below target has increased across all five measures (table 2). For HPCIA use, the proportion of herds below target has increased from 66.8% in 2017 to **99.3%** in 2022 for injectable HPCIAs, and from 80.0% in 2017 to **99.7%** in 2022 for intramammary HPCIAs.

- For intramammary tube use, the proportion of herds below target has increased from 73% in 2017 to **87%** in 2022 for milking cow tubes. For dry cow tubes, the proportion below target increased from 71% in 2021 to **75%** in 2022. This was the first increase since 2019.

- In mg/PCU, the proportion of herds below target has increased from 61% in 2017 to **69%** in 2022 (table 2).

- In 2022, across all products (excl. topical) and in terms of total mg, betalactams (excl. 3rd & 4th gen. cephalosporins) are most used (**38%**), followed by aminoglycosides (**18%**), a slight reduction than in previous years, and tetracyclines (**15%**) (table 3).

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Table 1 / Mean total use from FarmAssist data 2017 to 2022 for the five RUMA measures.

	2017	2018	2019	2020	2021	2022	RUMA Target
Number of herds	205	274	536	1175	1090	1045	-
Total mg/PCU	22.4	19.3	19.0	19.6	19.9	18.2	< 21.0
HPCIA injectable mg/PCU	0.586	0.228	0.036	0.023	0.023	0.014	< 0.461
HPCIA intramammary DCD	0.132	0.053	0.009	0.007	0.002	0.001	< 0.166
Milking cow DCD	0.639	0.512	0.515	0.471	0.436	0.402	< 0.727
Dry cow DCD	0.451	0.373	0.374	0.404	0.401	0.396	<0. 586

Figures 1a-e / Mean total use from FarmAssist data 2017 to 2022 for the five RUMA measures.
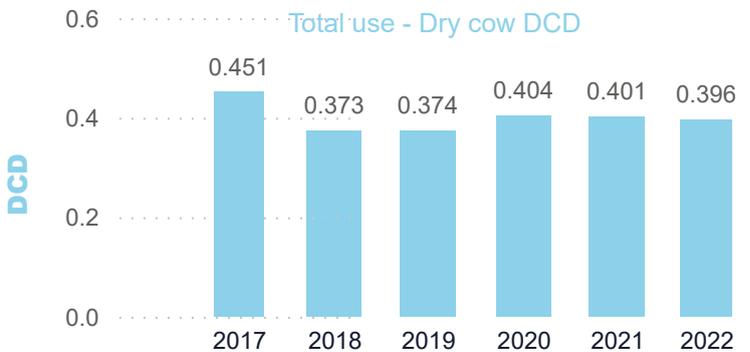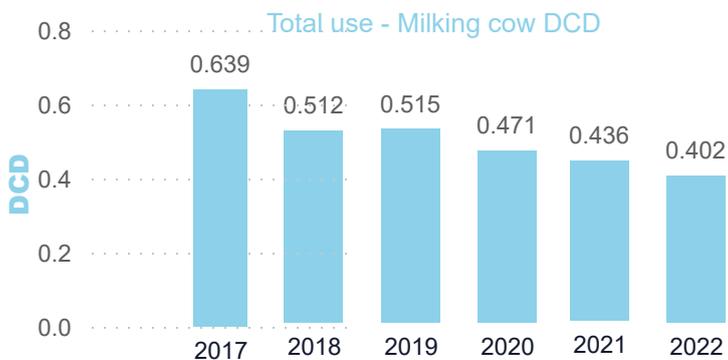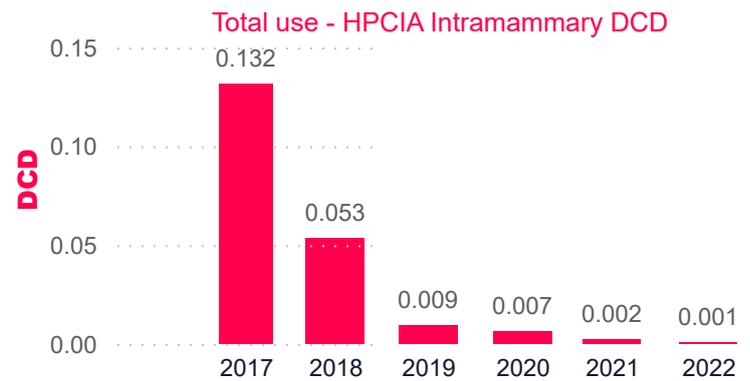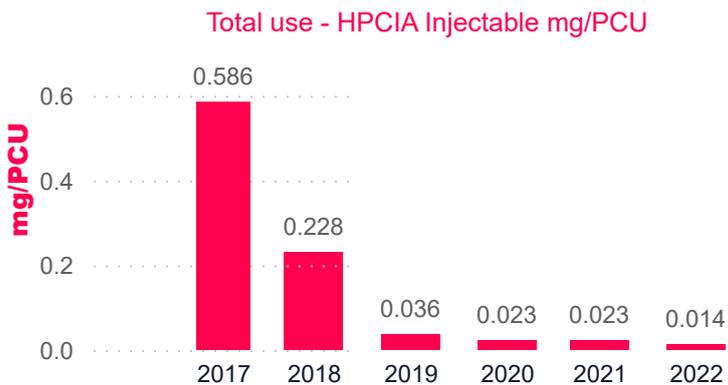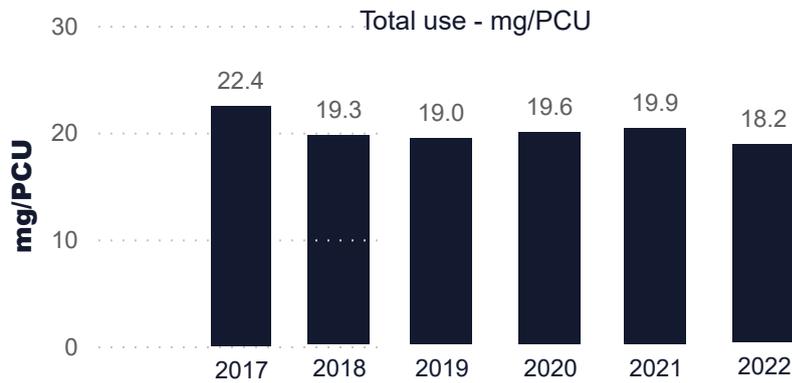
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Table 2 / Proportion of herds recorded in FarmAssist below target, 2017 - 2022.

	2017	2018	2019	2020	2021	2022
Number of herds	205	274	536	1175	1090	1045
Total mg/PCU	61%	66%	66%	64%	64%	69%
HPCIA injectable mg/PCU	66.8%	83.2%	97.6%	98.6%	98.7%	99.3%
HPCIA intramammary DCD	80.0%	89.8%	98.5%	99.0%	99.7%	99.7%
Milking cow DCD	73%	78%	80%	83%	85%	87%
Dry cow DCD	65%	76%	78%	75%	71%	75%

Figures 2a-e / Proportion of herds recorded in FarmAssist below target, 2017 - 2022.
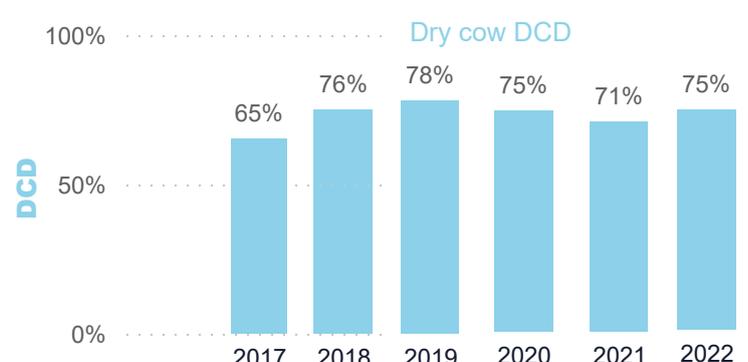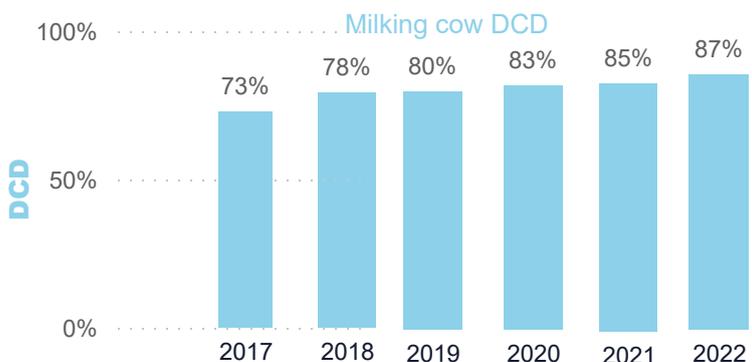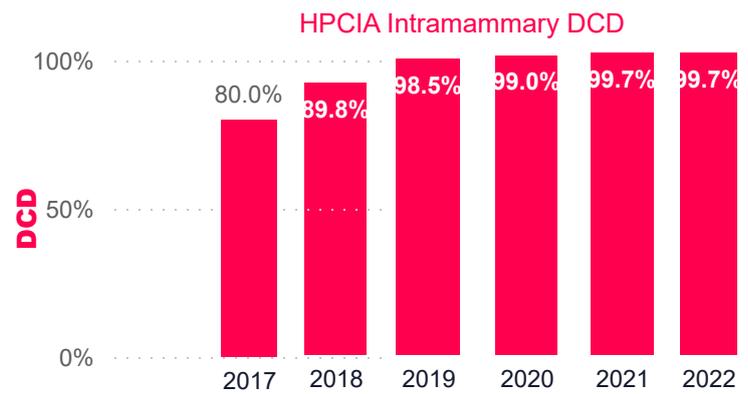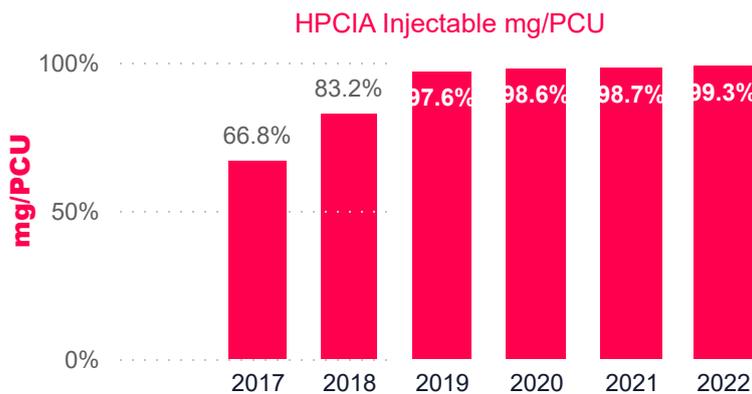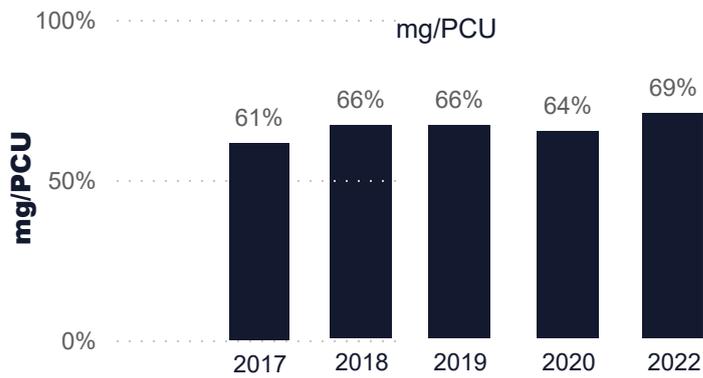
Classification Distribution

Table 3 / Distribution of total mg by antibiotic class for ALL products (excl. topical) in 2017 - 2022. Includes products used in both adult and youngstock dairy cattle. (*NB 3rd/4th gen cephalosporins in 2021 and 2022 equals 0.04% and 0.01% to 2dp respectively)

Classification	2017	2018	2019	2020	2021	2022
Betalactams (excl. 3rd & 4th gen cephalosporins)	31.8%	33.6%	36.6%	38.4%	36.3%	37.8%
Aminoglycosides	22.3%	22.1%	20.3%	19.6%	21.5%	18.1%
Tetracyclines	19.7%	17.1%	15.2%	15.1%	14.1%	15.4%
Trimethoprim/sulphonamides	7.7%	11.7%	13.1%	11.8%	13.2%	14.2%
Macrolides	10.8%	10.3%	9.6%	9.6%	9.5%	8.8%
Amphenicols	3.2%	2.8%	3.8%	4.4%	4.3%	4.8%
Other	1.3%	1.2%	1.1%	0.9%	1.1%	0.9%
3rd/4th gen cephalosporins	2.1%	0.8%	0.1%	0.1%	0.0%	0.0% *
Fluoroquinolones	1.2%	0.5%	0.1%	0.1%	0.1%	0.1%

Figure 3 / Proportion (%) of total mg by EMA classification for ALL products (excl. topical) in 2022

EMA Class
- D
- C
- B

0.1%

37.1%

62.8%
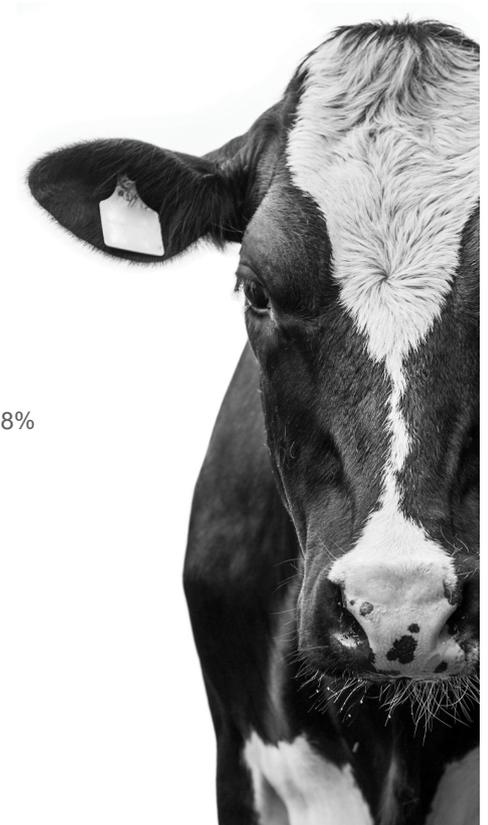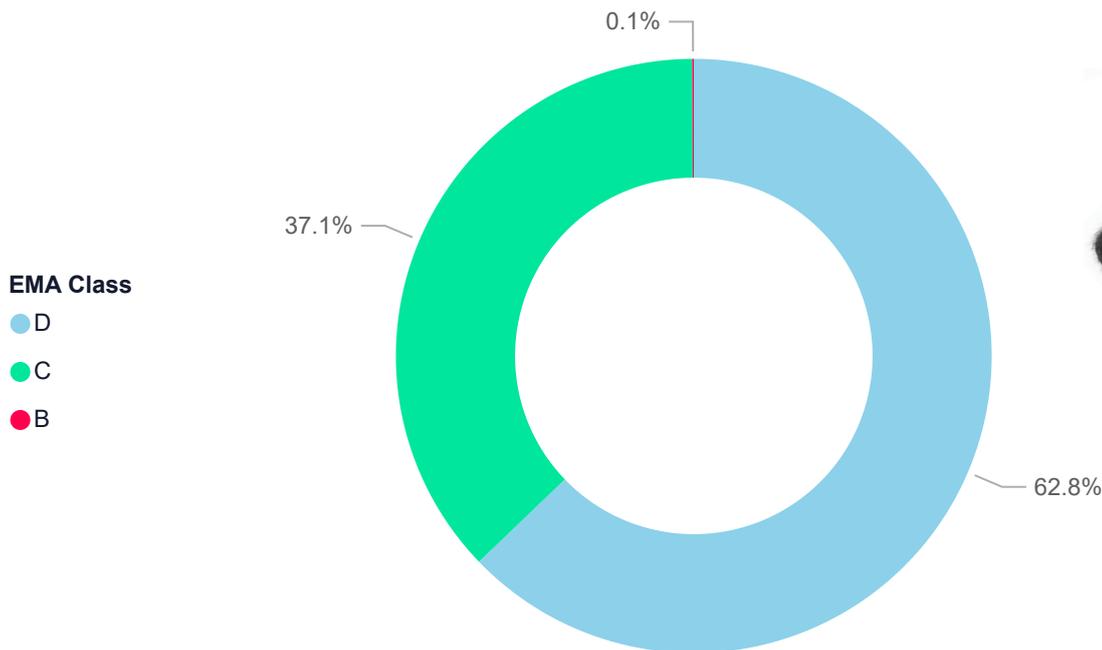
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Figure 4 / Distribution of total use, in mg/PCU, by rolling 12-months, 2017 - Q1 2023. The mean is shown in green and the black lines show the use for the median, 25th and 75th percentiles.

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