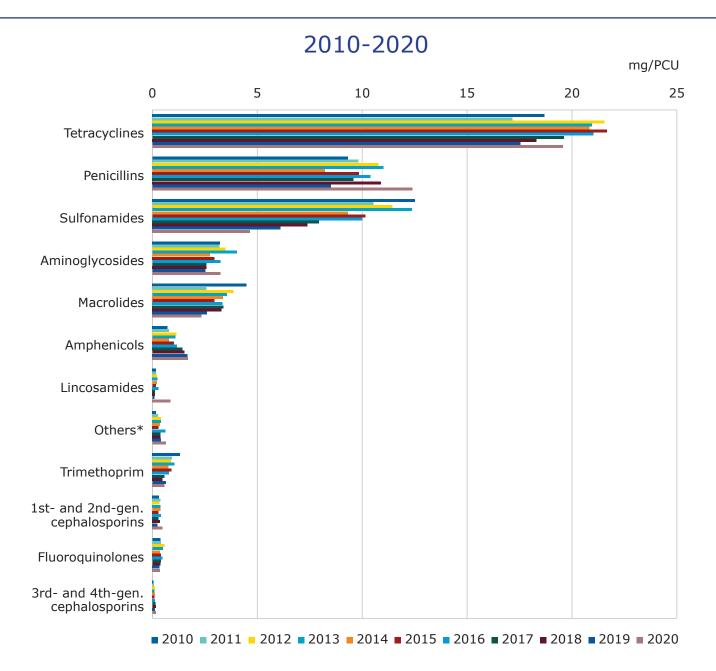
## SALES TRENDS (MG/PCU) OF ANTIMICROBIAL VMPs FOR FOOD-PRODUCING ANIMALS



For reasons of commercial confidentiality, polymyxins and pleuromutilins are aggregated with 'others'.

No sales of other quinolones in any of the years.

<sup>\*</sup> The class 'Others' includes sales of the following sub-classes: Imidazole derivatives (metronidazole), and Other antibacterials (novobiocin, spectinomycin). Of note is that some of the sales could be for non-food-producing animals.

Total sales of veterinary antimicrobial agents for food-producing animal species (mg/PCU) in Ireland have fluctuated marginally from year to year, reaching a peak in 2013 (55.68 mg/PCU) and a trough in 2019 (40.79 mg/PCU). From 2019 to 2020, total sales increased by 15.2% to 47.01 mg/PCU.

As the antimicrobial classes with the highest sales over the years (in mg/PCU), tetracyclines, penicillins and sulfonamides accounted for 41.6%, 26.4% and 9.9%, respectively, of all sales in 2020.

Since 2011, sales of 3rd- and 4th-generation cephalosporins show a tendency towards growth and peaked in 2020 at 0.16 mg/PCU. In 2011, this subclass accounted for 0.15% of total sales (mg/PCU), while in 2020 the figure was 0.35%.

In 2020, sales of fluoroquinolones were 0.36 mg/PCU, while the total sales figure for the 25 countries was 2.21 mg/PCU. Sales figures of fluoroquinolones have fluctuated slightly over the years, with a peak of 0.57 mg/PCU in 2012 and a trough of 0.34 mg/PCU in 2019.

Sales of polymyxins cannot be reported for reasons of commercial confidentiality, due to the low number of products authorised on the market in Ireland. However, it should be noted that sales of colistin are below 0.5 mg/PCU.

Ireland's national action plan on antimicrobial resistance for 2017–2020 (iNAP) was published in 2017. This plan sets out a range of strategic objectives with targeted interventions and activities to address antimicrobial resistance. As part of the efforts to achieve these objectives, the Department of Agriculture, Food and the Marine (DAFM) carried out education and awareness training on antimicrobial resistance and disease prevention through a knowledge-transfer programme for participants from the farming sector. An animal sector implementation committee involving key stakeholders from industry was established to oversee the animal sector actions detailed in iNAP.

For 2019, the reduction in sales of antimicrobials was considered, in part, to have been due to the result of national initiatives by a number of stakeholders aimed at encouraging prudent use of antimicrobials as part of iNAP. However, the subsequent increase in reported sales of antimicrobials in 2020 to levels broadly similar to those reported for the years prior to 2019 calls this interpretation into question. While some marketing authorisation holders reported manufacturing issues in 2019, this is not considered to have accounted for the magnitude of the decrease observed.

One major factor that could have influenced the observed increase in sales in 2020 is the effect of Brexit. Due to the uncertainty around Brexit and the potential implications for availability of products in 2021, over-purchasing of some antimicrobial products during 2020 was reported. The impact of over-purchasing on overall antimicrobial sales during 2020 is unknown. It is likely that several more years' worth of data will need to be reviewed before it can be determined if the sales data for 2019 and 2020 are anomalies.