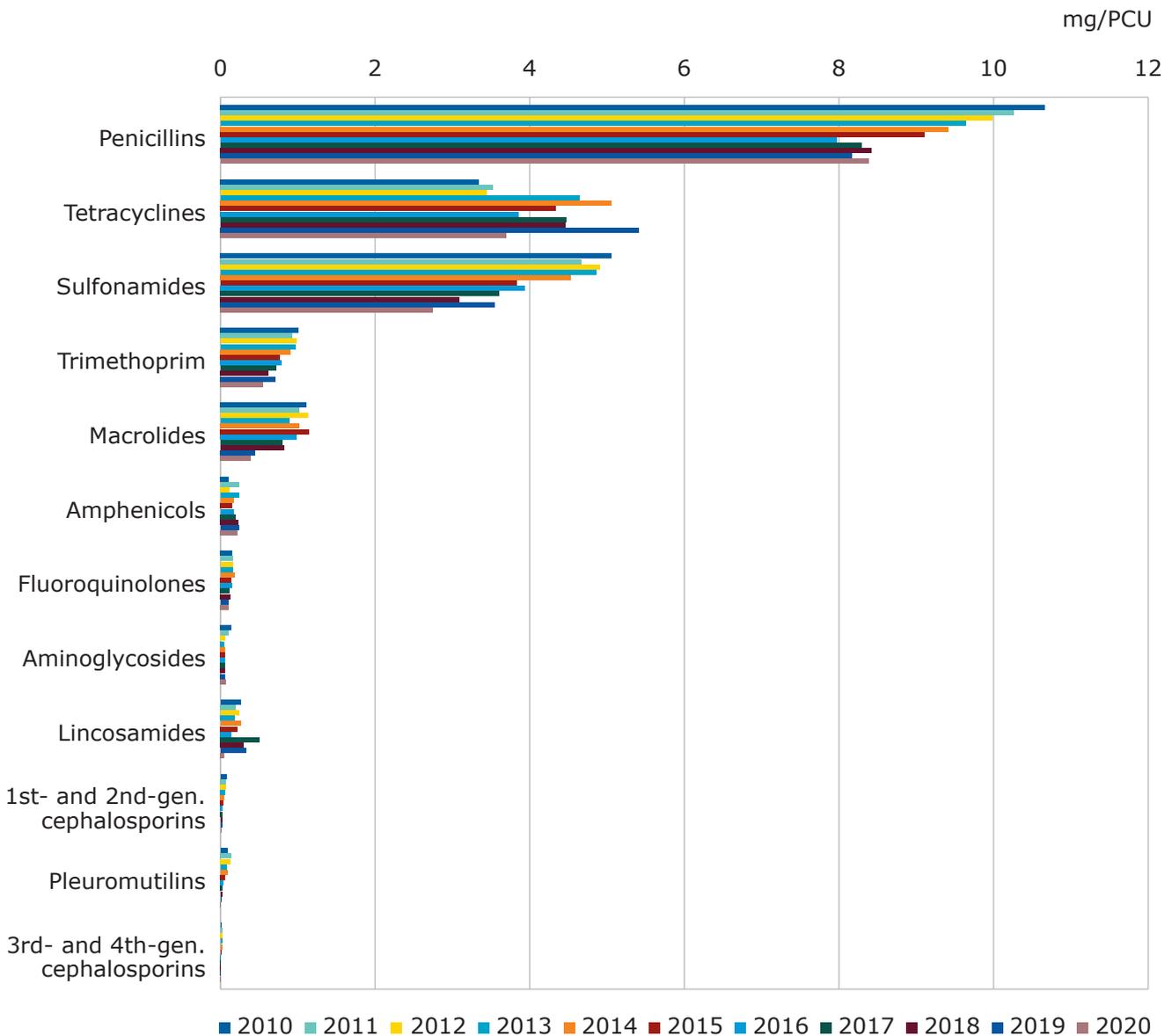




SALES TRENDS (MG/PCU) OF ANTIMICROBIAL VMPs FOR FOOD-PRODUCING ANIMALS

2010-2020



No sales of other quinolones, polymyxins and 'others' in any of the years.

Overall annual sales of veterinary antimicrobials in Finland have remained low and a decrease of 24% from 2011 (21.3 mg/PCU) to 2020 (16.2 mg/PCU) has been observed.

Penicillins continue to be the highest-selling antimicrobial class (52% in 2020), followed by tetracyclines (23%) and sulfonamides (17%). Beta-lactamase-sensitive penicillins accounted for 92% of sales of all penicillins. Sales of most antimicrobial classes show a decreasing trend. Over time, the most significant changes in mg/PCU are linked to reductions in sales of penicillins, the sulfonamide-trimethoprim combination

and macrolides. Sales of tetracyclines show a trend of biphasic growth from 2010 to 2020, with peaks in 2014 and 2019.

No 4th-generation cephalosporins are on the market in Finland, and 3rd-generation cephalosporins are only available as injectables. Sales of 3rd-generation cephalosporins are very low: in 2020 they accounted for only 0.003% (0.0004 mg/PCU) of total annual sales. Aggregated sales for the 25 countries from 2011 to 2020 were 0.16 mg/PCU.

Fluoroquinolones are only available as injectables for food-producing animals and their sales are low: in 2020 they accounted for 0.7% (0.11 mg/PCU) of total annual sales. Aggregated sales for the 25 countries from 2011 to 2020 were 2.21 mg/PCU.

Polymyxins have never been used in food-producing animals in Finland and, as for other quinolones, no sales were reported in any of the years under consideration.

The total population of food-producing animals (measured as PCU) was relatively stable throughout the 2010s but decreased slightly between 2018 and 2020.

Increased overall sales in 2019 compared to 2018 (5%) and a marked decrease in 2020 compared to 2019 (15%) were mostly due to changes in sales of in-feed administered tetracyclines and sulfonamide-trimetoprim combinations. In autumn 2019, a shortage of in-feed administered tetracycline was followed by a major increase in sales of other in-feed administered VMPs. Although species-specific sales data are not available, an increase in sales of these classes to veterinarians treating fur animals was noted in 2019. It is not known whether the increased sales in 2019 were simply due to users stocking up or increased use in fur animals. Correspondingly, the reasons for decreased sales in 2020 are not known but could be explained, at least partly, by a marked decrease in the number of fur animals (30%).

Sales of 3rd-generation cephalosporins and fluoroquinolones have decreased by 97% and 30%, respectively, since 2011. During that period, national law was strengthened to include, among other things, a requirement for susceptibility testing before using HP CIAs. Thereafter, control actions were targeted at veterinarians prescribing large quantities of 3rd-generation cephalosporins. Both measures seem to have been effective.

For decades, the key policy objective in Finland has been to reduce the need for antimicrobial medication in animals by eradicating animal diseases, using biosecurity measures and efficient herd health programmes to achieve good animal health. If antimicrobials are needed, they should be used cautiously, in accordance with the national prudent use guidelines (available since 1996 and updated three times, the latest in 2016). An overview of the strategic actions implemented since 1949 is available on the Finnish Food Authority website¹.

As a result of comprehensive and efficient control policies, the overall resistance situation in Finland is favourable, as shown by bacteria isolated from animals and food of animal origin and described in the Finnish Veterinary Antimicrobial Resistance Monitoring and Consumption of Antimicrobial Agents reports (FINRES-Vet, published since 1999²).

¹ Milestones in prudent use of antimicrobials in animals in Finland: <https://www.ruokavirasto.fi/en/farmers/animal-husbandry/animal-medication/controlled-use-of-medicines/principles-of-antimicrobial-therapy/milestones-combating-amr/>

² FINRES-vet reports: <https://www.ruokavirasto.fi/en/farmers/animal-husbandry/animal-medication/monitoring-of-antibiotic-resistance/finres-vet-reports/>

