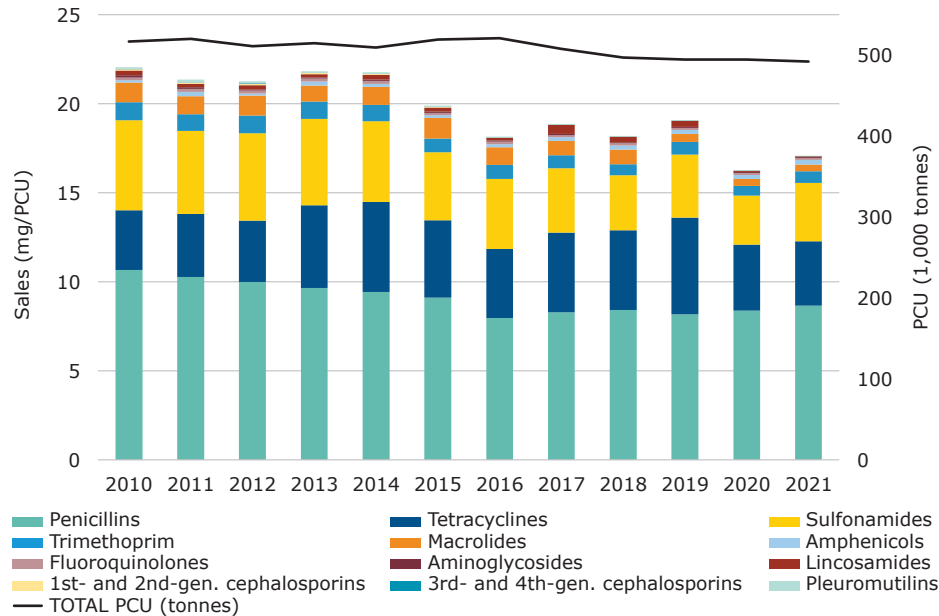


Sales trends (mg/PCU) of antibiotic VMPs for food-producing animals

Sales trends by antibiotic class (mg/PCU) from 2010 to 2021^{1,2}



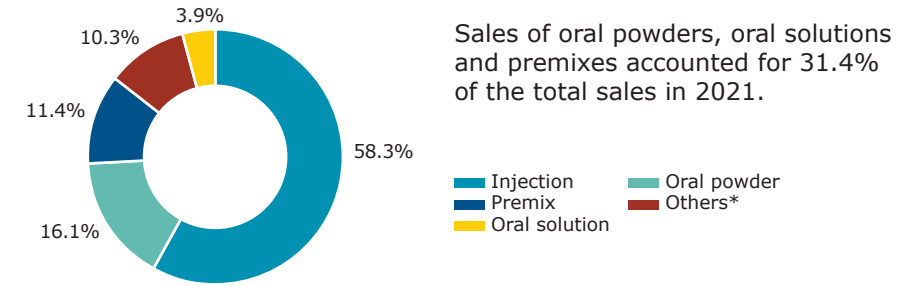
¹ Sales data sorted from highest to lowest in 2021.

² No sales of other quinolones, polymyxins and 'Others' (classified as such in the ATCvet system) in any of the years.

Since 2011:

- ⬇️ 20.1% overall annual sales (from 21.3 mg/PCU to 17.0 mg/PCU in 2021)
- ⬇️ 97.7% 3rd- and 4th-generation cephalosporin sales (from 0.02 mg/PCU to <0.01 mg/PCU in 2021)
- ⬇️ 30.8% quinolone sales (from 0.16 mg/PCU to 0.11 mg/PCU in 2021)
- 100% of all quinolone sales for this period were of fluoroquinolones
- No sales of polymyxins in any of the years
- ⬇️ The PCU decreased by 5.4% between 2011 and 2021

Proportion of sales (mg/PCU) by product form in 2021¹

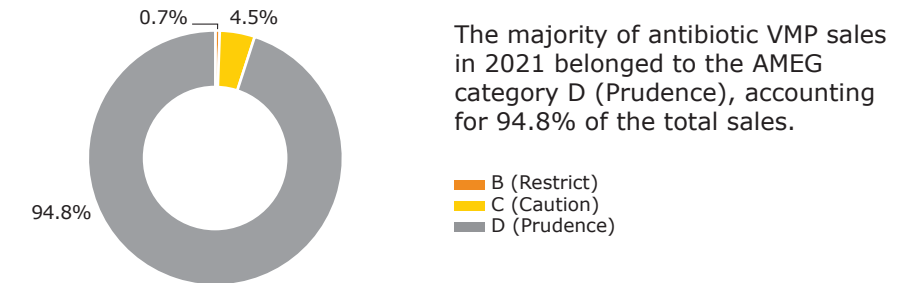


Sales of oral powders, oral solutions and premixes accounted for 31.4% of the total sales in 2021.

¹ No sales of intrauterine products in 2021.

* Other forms include intramammary and oral paste products.

Proportion of sales (mg/PCU) by AMEG categories in 2021



The majority of antibiotic VMP sales in 2021 belonged to the AMEG category D (Prudence), accounting for 94.8% of the total sales.

2021 sales data

In 2021, overall sales increased by 5.0% in comparison to 2020 (from 16.2 mg/PCU to 17.0 mg/PCU). The three highest selling antibiotic classes were penicillins, tetracyclines and sulfonamides, which accounted for 50.8%, 21.2% and 19.2% of total sales, respectively.



Country information

Sales of antibiotics for the treatment of food-producing animals in Finland may be described as modest and prudent. Modest because the sales in 2021, 17.0 mg/PCU, were the second lowest ever recorded, and prudent because 95% of sales in 2021 consisted of first-line antibiotics as recommended by the AMEG. By far, penicillins account for the majority of overall sales (51%), with the narrow spectrum beta-lactamase sensitive penicillins accounting for 92% of all penicillin sales. Over two thirds of the overall sales in Finland corresponded to product forms mainly intended for the treatment of individual animals, and only the remaining third to products administered via feed or drinking water for the treatment of groups of animals.

The proportion of antibiotics classified as critically important in human medicine (AMEG category B 'restrict') was less than 1%. Although overall sales in 2021 showed a 5% increase compared to 2020 after a decade of a decreasing trend, they still represented the second lowest ever value recorded. Sales of AMEG category B antibiotics available in Finland — i.e. sales of 3rd-generation cephalosporins and fluoroquinolones — continue to be low and have decreased since 2011 by 98% and 31%, respectively. 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. Finland is a small market area and severe disruptions in the availability of basic antibiotics are not uncommon. Use is greatly affected by availability issues, and fluctuations in sales on a yearly basis must be interpreted bearing this in mind.

For decades, the key policy objective in Finland has been to reduce the need for antibiotic treatment in animals by eradicating animal diseases, using biosecurity measures and efficient herd health programmes to achieve good animal health. If antibiotics are needed, they should be used prudently, in accordance with the national prudent use guidelines. Old narrow spectrum antibiotics for the individual patient is at the heart of these principles. 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://ruokavirasto.fi/en/amr/milestones>

² FINRES-vet reports: <https://ruokavirasto.fi/en/amr/monitoring/finres-vet>